

ALL HANDS

**in this issue
NAVY WINGS**



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for 10 readers. All should
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JUNE 1959



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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VICE ADMIRAL H. P. SMITH, USN

The chief of Naval Personnel

REAR ADMIRAL J. R. LEE, USN

The Deputy Chief of Naval Personnel

CAPTAIN O. D. FINNIGAN, Jr., USN

Assistant Chief for Morale Services

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CDR F. C. Huntley, USNR, Editor

John A. Oudine, Managing Editor

Associate Editors

G. Vern Blasdel, News

David Rosenberg, Art

Elsa Arthur, Research

French Crawford Smith, Reserve

Don Addor, Layout

• FRONT COVER: LOOKING BACK OVER student pilot's shoulder, one gets this view of flight instructor in rear cockpit of a Navy training plane as he passes the word to an aspirant to the Navy wings of gold.

• AT LEFT: CATMEN—Fast action of catapult crews on the flight deck of USS Franklin D. Roosevelt (CVA 41) sends jet pilots and planes roaring aloft during Fleet maneuvers.

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who had two years of college or its equivalent; an *Aviation Officer Candidate* (AOC), who was a college graduate; or an *Officer Student* (OI) —each came to Pensacola (for the same purpose) to learn how to fly a Navy airplane.

LET'S CONSIDER these men one at a time. The first obstacle that confronts every one of them is pre-flight training. For the NavCad and the AOC, it's 16 weeks of classroom work. The program calls for him to become a naval officer first, and a naval aviator second.

The officer student takes about the same course minus the officer indoctrination. He's already an officer. He spends "only" 10 weeks in pre-flight. His training is limited to actual pre-flight work.

The military training of the Nav-

THE MAKING OF A NAVAL

That's what this issue is mainly about—the making of a Naval Aviator, and the men who help him to become airborne. In the sea-service today, aviation in some way or other plays a role in the life of every single Navyman.

A SQUADRON OF FOUR Navy planes wings its way toward Pensacola in parade formation. Below is the clear blue salt water of the Gulf of Mexico. Above the crystal clear blue heavens. Flying the planes are student naval aviators.

A few short months ago they had never seen the inside of a cockpit. Today they are confident. Yesterday they were scared.

It doesn't matter. The past is behind them, and they face the future. Today they are in the sky, flying the T-28 Navy propeller-driven trainer, a hotter job than most fighter planes the United States had during World War II. Nothing but "kiddie car" trainers, but they cruise at 170 knots.

The climb to the cockpit of this plane was difficult. Before any one of these four pilots was permitted merely to sit in the plane, he had spent many weeks on the ground in classrooms.

Classroom work is tedious, dull and hard work. It doesn't matter whether any one of the four was a *Naval Aviation Cadet* (NavCad),

Cads and AOCs begins immediately —during indoctrination. This first week is spent in lectures, getting clothing, bracing, sounding off—and they are subjected to extra-strict discipline. Remember the discipline in "boot" camp? This is more of it—only more so.

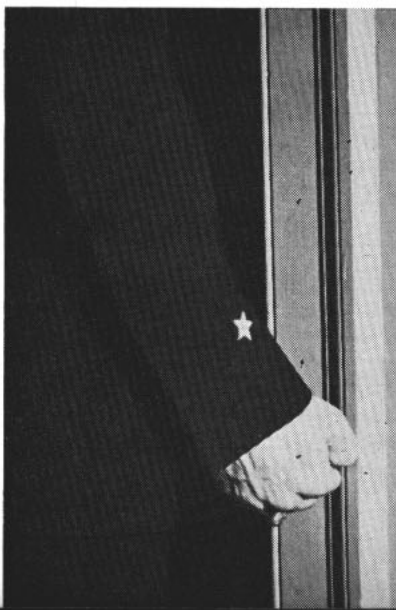
"We were out of civilian clothes and into a new routine in a jiffy," recalled one cadet. "Although we had been issued our uniforms, they had to be tailored before we could wear them. In the meantime we wore 'poopy suits'." (A poopy suit is a coverall type suit similar to an exposure suit worn by pilots.) Like the boot camp recruit's "dirty" shirt, the pre-flight's poopy suit is designed to make you forget your fancy civilian clothes in a hurry.

AT THE END of the first week the men get their tailored uniforms. They fit fine, usually. Then comes the first inspection.

"I'll never forget it," said D. E. Squires, a NavCad from Mebane, N. C. "That inspecting officer looked liked the meanest man in the world. One of the new men forgot his name tag. The inspection officer passed down the long line of cadets and then stopped in front of him. He said, 'What are you doing out here? You're out of uniform. Get inside.' The guy almost died of fright. It's funny now

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PRE-FLIGHT SYMBOLS include traditional knock and (rt) student's bookbag.



when you talk about it, but we were scared then."

But indoctrination week passes rapidly—after it's over. Then there's only 15 weeks left before you can get to that plane.

On the surface, pre-flight might not seem too hard; just 15 weeks to endure before the T-34 trainer becomes a reality. But pre-flight training is more complicated than just learning to fly one plane. You have to cram into that short time military doctrine, theory of flight, a smattering of physics, how an engine works, psychology, physiology, physical fitness—and how to shine your shoes.

ENS RODNEY KAUBER, USNR, an officer student from Johnstown, Ohio, confessed he had a civilian pilot's license before he came to Pensacola.

"At first I thought I had it made

AVIATOR

—easy. I knew the problems. But when I saw the training syllabus, I suspected how tough it would be. I wondered if I could make it."

It's no wonder. Here's what he read:

Basic Aviation Science—60 hours
Elementary Physiology—9 hours
Practical Aviation Physiology—10 hours
Engineering—31 hours
Naval Orientation—35 hours
Administrative Time—21 hours
Study—34 hours
Navigation—33 hours
Indoctrination—23 hours
Physical Fitness—50 hours
Survival—49 hours
Swimming—40 hours
Principles of Flight—30 hours
Study Skills and Recognition—25 hours
That makes a total of 450 hours.

ENS Lawrence H. Schlang, USN, from Cambria Heights, N. Y., a Naval Academy graduate, remarked that the biggest problem for many of the students is the math and physics (part of basic aviation science). "This part of it didn't bother me too much," he confessed. "We had a lot of it at the Academy."

Second LT Karl Kerstein, USMCR, had an engineering background. "That made the work easier for me. Some others just couldn't hack it."

Instructors emphasized, however, that although advance math courses are not essential, they are preferable. "We can take a man from eighth

NAVAL AVIATION CADET STORE
HOURS
0800-1100 1200-1500 MON. *Thru* FRI.



UNIFORM OF THE DAY—Pre-flight cadet leaves store with load of new uniforms. Below: Formation of NavCads with book bags moves across campus.





AS THE CROW FLIES—Prospective aviators receive instructions in navigation. Here, they learn position of navigational stars to relative position on earth.

grade arithmetic and run him all the way through college calculus. If he doesn't have more than eighth grade arithmetic, however, he's going to have to dig."

PHYSICS IS THE OTHER hurdle that seems to catch a number of men half way over. It's no wonder. Consider the following course, and bear in mind that it is only 36 syllabus hours long:

Physical terms; force; motion; Newton's laws; gravity; work; power and energy; hydraulics; centrifugal force; friction and gyroscopic principles; heat; heat transmission; change of state; gas laws; Bernoulli's principle; sound; sound mach number; electromagnetic spectrum; atomic structure and electron theory; characteristics of static and dynamic electricity; Ohm's law; basic circuits; series and parallel circuits; magnetism; electromagnetism; electromagnetic induction; generators and motors; and basic principles of alternating current and transformers—36 hours, remember?

The course is tough and students put in long hours of study. Holding a tight rein on the men during their stay at pre-flight is Captain H. S. Jackson, USN, their commanding officer. He went through the training at Pensacola in 1940. Today he is sincerely interested in every student as an individual. "Although there are just too many for me to know personally, many do come to my attention for different reasons. I get a great feeling of accomplishment when I can help them.

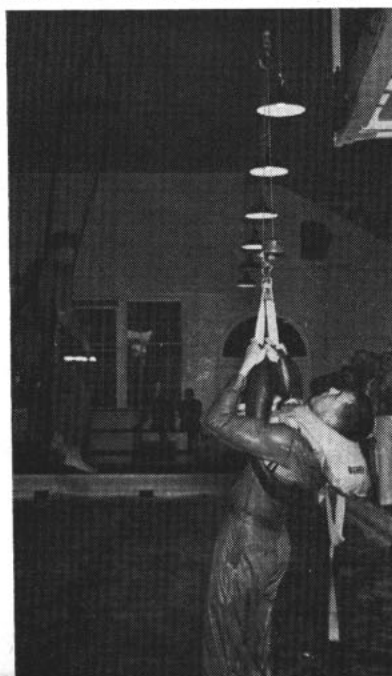
"If a man is having trouble with his work I like to help him catch

hold. If he is an outstanding student, I watch him develop. I have seen over 8000 men pass through pre-flight. Each week one group graduates and a new group comes in to take its place. We have about 800 students aboard at one time. I try to help each one make the grade."

TO MAKE THE GRADE is the ambition of every student. For one out of every three students, however, his ambition will not be realized. Only two-thirds of the men who enter pre-flight will wear Navy Wings of Gold.

Don't get the wrong idea. The Navy drops no one who is capable of finishing the training and who is sincerely interested in the program.

POOL JOB—Cadets familiarize themselves with emergency rescue techniques at sea in station's large pool.



If someone falls behind in his studies, he is given extra time and assistance. Only if there is no hope, or interest, is a man dropped from the program. LTJG Dick Newell of Pender, Neb., who is an AOC, advises, "Be ready to work for those wings. They're not going to give them to you."

Work is the secret, and for this, nearly every minute of the day is scheduled. It's not all in the classrooms, however. Fifty hours are spent on physical training. You always run to and from these classes. Then there's a little matter of running a 350-yard obstacle course. This consists of several hurdles, a maze, several six-foot by 14-foot bulkheads, water jumps, and a few more interesting obstacles.

In the gymnasium you work on the sidehorse, long horse, straddle vault, rope climb, and trampoline. This is, of course, in addition to the hours spent practicing dive rolls, head balance, handsprings and work on the horizontal bar. The rolls and dives are to help a man learn parachute landing techniques. These landings are practiced in the gym. A man, strapped in a parachute harness, swings from a ledge and rolls to a landing on the matted gym floor.

ANOTHER PHYSICAL TEST—and probably one of the most exhausting and best known—is the step-test. It's simple. You merely step from the floor to the top of a 20-inch high bench and then back to the floor. This is done 30 times per minute at a steady cadence. At the beginning of pre-flight you participate as long as you're able. At the end you must "step" for five minutes. Some time when you feel full of vim and vigor, have a go. You'll find out.

Another important part of physical training, and an important part of Navy life, is swimming. During these classes students learn to use the backstroke, breast stroke, side stroke, and the American crawl. They also swim with their clothes on.

The principle reason for swimming is for survival if forced down at sea. If a prop pilot has to ditch at sea, it is quite likely that he would ride the plane down. The problem then is to get out and away from the plane quickly and safely.

To simulate this, the Navy uses a Dilbert Dunker. This device, which

is mounted on an inclined track above the pool, is shaped like a cockpit. A student is strapped in as he would be in a plane—parachute, harness and all. The Dunker is then released. When it reaches the water it flips upside down. The student then has to unstrap himself and escape safe. Safety is stressed. If the instructor, who is under the water watching, thinks a student has not escaped properly, he is given a "thumbs down" and he must try again. The record is 14 tries before qualifying.

ALTHOUGH STUDENTS generally never get off the ground during pre-flight training, they do get their first trip into "space." First they learn how to use oxygen breathing equipment. Then they go inside a low pressure chamber and are taken to a simulated altitude of 30,000 feet. Jet trainees go to a simulated 43,000 feet.

At about 20,000 feet students are asked to remove their masks. During a 10-minute period they do simple tasks like playing patty-cake or placing cards in a slotted box. The effort needed to do such simple tasks has to be experienced to be fully understood. Students have a great respect for their oxygen supply after this live demonstration. A Navy corpsman is with the students at all time.

Meanwhile, back in the classrooms, students who are studying engineering learn the history and development of engines, principles of operation, lubrication and fuels for engines, ignition systems, propellers, superchargers, hydraulics, and test-stand trouble shooting.

A speed reading course is included in the "study skills" program. At the end of pre-flight a student must be able to read 600 words per minute, and comprehend 80 per cent of them.

Fifteen hours during pre-flight are spent in character education. Seventeen more in naval leadership and 110 hours in military indoctrination. This last includes drills, sword and staff movements, parades, and inspections. Other classes include organization of the Navy, and foundation of naval power.

IN SPITE OF the emphasis on safety, accidents will happen. Therefore, the job of the survival unit is to train men—just in case. Students get a thorough indoctrination of survival equipment and its uses before they ever leave the classrooms.

After the classroom indoctrination,



NOT SO SIMPLE—Student flyers find that even game of 'patty-cake' becomes difficult when oxygen is cut during training session in pressure chamber.

students practice survival methods in a patch of woods on the Base. They learn how to care for themselves if they are forced down on land. Many of the basic tasks are those regularly taught to Boy Scouts.

Near the end of pre-flight training, students are turned loose in the woods—with instructors—with only the bare essentials. For three days they survive on their own. They use snares, make-shift shelters, and any number of techniques necessary to stay alive. When the students return to base, they have a great deal more respect for their instructor's advice.

This field trip in survival generally ends pre-flight. Looking back over the 16 weeks, the students remember a lot of hard work. Classes from 0700 to 1605; a two-hour study period every night during the week; reveille at 0515; and taps at 2130.

Liberties had been scarce. After indoctrination week they had been allowed one Sunday afternoon off, but they had to be back in the barracks by 2230. They couldn't leave the base.

After three weeks, however, they had been allowed a short liberty. For those who remained aboard, however, there had been the ACRAC club. Quite regularly the club had held dances with hostesses from Pensacola.

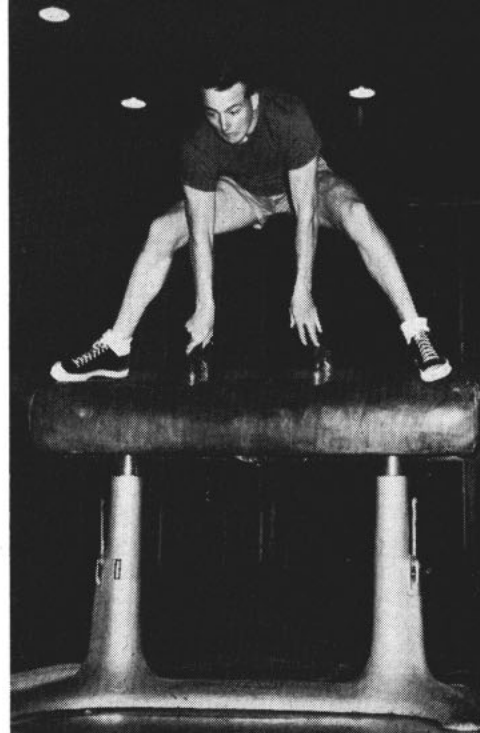
There hadn't been many liberties, but as they looked back, they realized that they had been allowed as many as study time would permit. Liberty takes time, and time was needed for study. Those gold wings are earned by work, not liberty.

Next stop, flight training at NAAS Sausley Field.

—Erwin Sharp, JO1, USN.

MIDNIGHT OIL—A lot of book learning has to be mastered in pre-flight training before naval aviation cadets get a chance at flying an airplane.





SHAPING UP—Exercises and gymnastics put pre-flight students in top shape and develop their physical coordination.

OVER THE HURDLES

YOU'VE SEEN the brief reference to the NavCad physical fitness program and survival training on page 4. But there's more to it than that. Here's a sample of what it's like:

Upon entering pre-flight, each student is given an entrance test designed to demonstrate his physical capabilities and to serve as a comparison to his outgoing test.

In the test, each cadet runs a speed agility course consisting of a six-foot bulkhead, low hurdles and several other obstacles. In addition, he is required to show his skill at

the chinning bar, situps, jump reach and the step test.

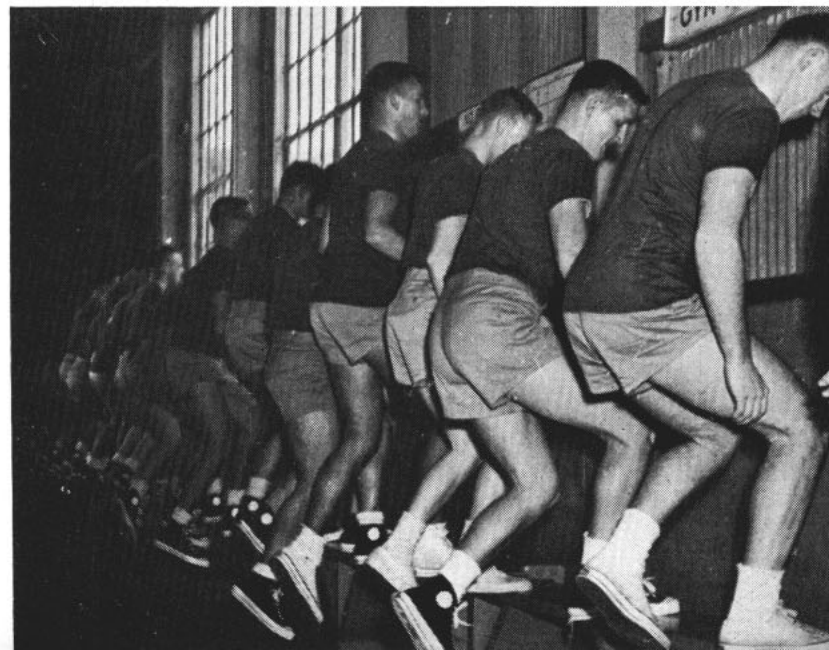
When this test of endurance is completed, if the cadet's cumulative score is not within the standard minimum, he is placed on "Sub P. T." and must take the test every Saturday morning until he passes it.

After the incoming test, the next hazard the cadet faces is the obstacle course. This consists of 380 yards of bulkheads, rope climbs, mazes and hurdles to be completed in at least two minutes and 50 seconds. Each cadet runs the course three times

while in pre-flight and is required to pass the time test at least twice. Two minutes rates a 4.0 in the book.

The next phase of the program is the gymnastics and trampoline training which gives a good indication of the cadet's coordination. Joe Lowder and B. A. Johnke serve as gymnastics coaches. Tumbling, rope climb, work on the low and high horse, parallel bars and trampoline fundamentals are some of the subjects covered. The trampoline is a favored means of workout as it is considered especially effective in training the cadet how to cope with unusual attitudes.

STEPPING OUT—Step-test is one of Pensacola's most exhausting exercises. At end of pre-flight training cadets must be able to 'step' for five minutes.



PARACHUTE TRAINING is also a part of the program. Cadets are taught, and have an opportunity to practice, different types of landings both on the ground and in the water by means of the jumping platforms and the parachute harnesses.

Amateur wrestling gives the cadet a chance to match his skill, coordination and strength against that of his classmates. The instructors demonstrate the various holds, take-downs and movements the cadets are expected to master. At the end of the course, each cadet is matched against a classmate, and must give an exhibition of wrestling. His score depends upon his mastery of the game.

Three periods of hand-to-hand combat are given. The cadet learns, among other things, how to escape

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from choke holds and how to disarm an opponent.

At the end of the physical fitness course, the cadet runs the obstacle course for the last time and takes his outgoing test.

AS MENTIONED EARLIER, one further test—survival—must be passed before the student completes his pre-flight phase.

The survival course, given to officers and cadets, has a three-phase program which includes classroom instruction, field exercise and a three-day field trip to Eglin Reservation in which the students are required literally to live off the country.

The classroom phase, through lectures, demonstrations, first aid and visual aids, teaches the different kinds of survival and the problems involved.

Basic considerations for general health and welfare are keeping yourself, camp and equipment clean, purifying water; avoiding poisonous plants, insects and snakes, and the preservation of food.

It is the objective of the class to demonstrate the methods of improvising survival equipment by the use of natural materials, the parachute, and salvaged parts from the downed aircraft.

The students learn that one of the most useful pieces of equipment is the parachute. An overturned, inflated liferaft can be propped up and used as a lean-to. Or it can be used as a mattress if an overhead shelter is already available.

In addition to the classroom instruction, field exercises in the local woods are regularly carried out. Here, the student demonstrates his ability to build fires for warmth, cooking and signalling, constructs shelters, finds natural food and practices land navigation.

The class learns that there are five basic requirements that the survivor

must fulfill before attempting to travel. These are: You must know where you are; you must have a means of setting and maintaining a course; must have physical stamina; must have suitable clothing and equipment; must have a source of food, fuel and shelter.

In addition to the various classroom and field exercises, the students are instructed on survival and travel in enemy territory, which they also practice during the three-day trip.

THE FIELD TRIP is the first step in the student's career toward formal survival training. It is a proving ground in which he can demonstrate and practice survival techniques.

A low, wooden structure with a sign on the front reading "U. S. Naval School, Pre-Flight Survival Unit" is the starting point of the trip. Here, the students are given their briefing before they begin their long, tough trek through the woods and swamps. They are given a description of the exercise, equipment to be used, and the basic ground rules.

Equipment issued each survivor includes a topographical map of the area, a machete kit, a sheath knife, an entrenching tool, emergency rations to last three days, and a sail needle. Three parachutes and one first aid kit is issued per nine students.

Divided into groups of nine men and an instructor, the students pull out for the first night's camp. Along the way they practice land navigation, basic survival, food procurement and first aid problems.

For safety purposes, the instructor carries with him a portable phone on which he makes hourly reports of the group's progress to the officer-in-charge of the trip.

At the first night's camp, traps and snares are set out to provide for the evening meal, fires are built and sleeping quarters are organized.

One of the strict rules of survival is to keep yourself clean, and to keep your equipment clean. In line with this, the students bathe and shave every night. The instructor inspects the camp, gives a critique of the day's work and briefs the students for the next day.

The second day the student practices cross-country travel by working out a triangular course that encompasses five miles. He travels this course by the use of a compass only.

The third day the instructor monitors a 15-mile hike while the students practice route finding, trail discipline and survival and evasion techniques. In the afternoon the elements divide into three, three-man groups on the return trip and rendezvous at the pick-up point and critique the hike before returning to camp to check in their gear.

Back at the main camp, where they started out three days earlier, the students are given a final critique before boarding the bus back to Pensacola and civilization.

They sleep well on the return trip.

—LT Robert R. Zastrow, USN



WOODSMEN—Cadets learn to survive in wilds. Left: Packs are secured for hike. Rt: Finding the way. Above: Critique.





UP IN THE AIR—As students succeed at Saufley Field, they progress to more advanced CarQuals and formation.

THE BIG HOP —

STUDENT NAVAL AVIATORS begin flight training at NAAS Saufley Field, just a few miles from NAS Pensacola where they underwent pre-flight training.

This is it. Now they can start flying.

Their immediate objective is the T-34 trainer, the *Mentor*.

In Basic Training Group One at Saufley they get their first taste of being a naval aviator. There, and for the remainder of their training, they are part of a squadron, just as they will be in the Fleet. Keen competition between squadrons help set high academic and safety standards.

During the first two days aboard, students receive a thorough indoctrination of what is to come during their stay with—they'll fondly re-

member—"BTG One." They meet their squadron leader. Also during these first two days, they are introduced to the T-34 familiarization cockpit.

This is an exact duplicate of the cockpit in the T-34. In addition to the regular instruction a student receives in the cockpit trainer, he is free to practice in it any time. It is a familiar sight to see a student sitting in the familiarization cockpit just looking and feeling. He must be familiar enough with this cockpit to find all the controls while blindfolded.

The first week at Saufley is spent on the ground. There's some difference of opinion about this first week. Is the tension less because you know that after this week you're actually

going to fly? Or is that last week tougher because you know you are still one week away from that flying machine? One thing is for sure, you have successfully graduated from pre-flight and you are still a part of the two-thirds who eventually get their wings. The work is still hard, but the tempo slackens a little. Not much, but a little.

Following the two-day indoctrination, students spend a full week learning about the plane they are going to fly. Flight procedures and engineering characteristics of the plane are explained.

CCLASSROOM WORK is not over. After the full week of ground training which prepares a student for his first flight, he only spends a half day in the classroom. The other half day he flies.

In the classroom it is pretty much a continuation of the courses he had in pre-flight. He studies aerology, communications (both code and voice), engineering, naval aviation orientation, principles of flight and visual navigation.

But to the student who wants to fly, that first week in school drags. He plods through the books, studying and waiting.

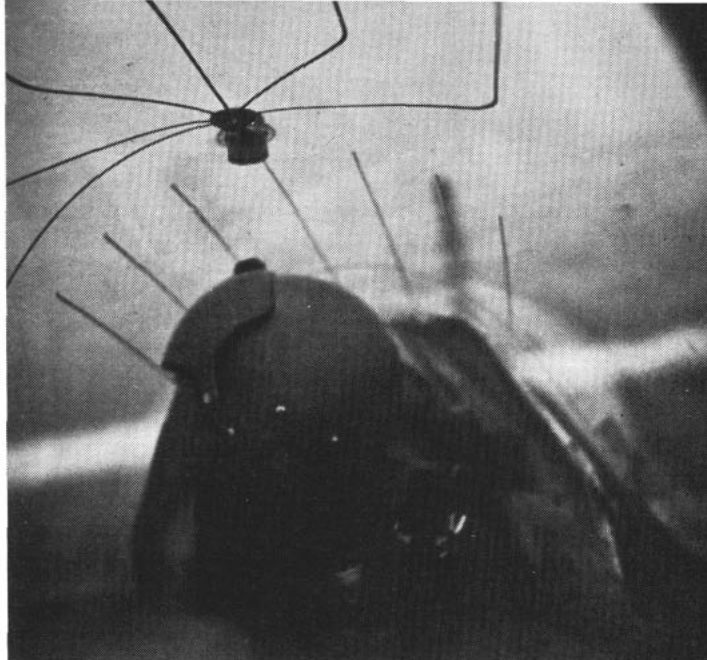
Then THE DAY arrives.

Flight P/SO-1 (Pre-Solo 1) is scheduled. He has already been in the familiarization cockpit many times, going over and over the instrument panel. He has also been reading the flight training instruc-

FIRST FLIGHT—Student starts engine after the signal that all is clear.



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FOLLOWING GROUND WORK at NAS Pensacola, NavCads take to the air and learn flying through experience.

'SAFE FOR SOLO'

tions for the T-34 *Mentor*. He knows he will not have to pilot the plane, but he wants to impress his instructor. After all, he will have the same man for most of his flights at Saufley, and he wants to get off to a good start.

He meets his instructor in the hangar. They both sign the "yellow sheet" and make sure the plane is ready. This is a must before any plane's take-off. (The "yellow sheet," which is not yellow at all, but white, is maintained on each plane. It shows all flights made, who was aboard, and any discrepancies noted during a flight. If something is wrong with the plane, it shows on the yellow sheet and the plane is not to be flown until it is repaired.)

OUTSIDE THE HANGAR the students step onto a trailer which will take them to their plane. As they move up the line of planes, flight procedures and a swarm of facts and figures learned in the classroom run through each student's mind. He also thinks of the 12 dual flights ahead of him before he can solo. Can he make the grade? At the moment, he's not sure.

The plane seems miles away, but they finally arrive. A big number 222 is on the fuselage.

First the student places his parachute in the front seat of the plane. Then he follows the instructor through the pre-flight checkout. The switches and controls in the cockpit

are checked first. Next they start around the plane: No cracks or breaks in the wings. No holes or bulges in the skin on the flaps or ailerons—they move easily. No apparent loose bolts, nuts or cotter pins. Gas tank full (he checks the only sure way—he looks into the tank). Landing gear and engine appear in good order, and—the engine is full of oil.

The student then climbs into the front seat.

The instructor checks his straps, gives him a few last minute instructions and then climbs into the rumble seat.

THEY GET THE SIGNAL from the plane captain that all is clear. The student gets the order to start the

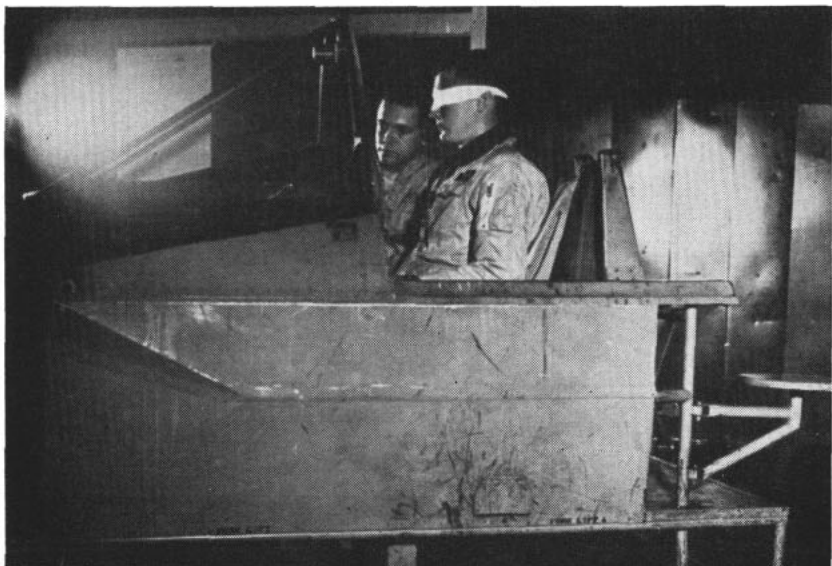
engine. This first time it'll be pretty much of a joy ride for him. The instructor warms up the plane, reads and executes the cockpit check-off list. The student takes careful note of this because he knows that on his second flight this is what he will have to do.

He listens intently as the instructor explains everything he is doing. A thumbs up is given to a ground crewman standing by to help get the plane away from the chocks. The instructor follows the crewman's signals carefully.

Now the plane is clear. It proceeds to its place beside the runway. The canopy slides shut. The engine is run up. Everything seems in order.

As the plane surges ahead, the student is forced back in his seat.

PRACTICE MAKES PERFECT—Cockpit trainer helps students learn controls.



The plane clears the ground and gains altitude. In a few short minutes they have leveled off, and the sudden realization comes to the student: "This is it. I'm flying."

The instructor demonstrates the use and effect of controls. He explains course rules and points out prominent landmarks. But he's careful not to tell the student too much. On his first flight the student is encouraged to relax. The student may even take the controls for a short time in level flight.

All too soon—for the student—Pre-Solo 1 comes to an end and the plane is headed for home. The plane banks toward the field. As the plane approaches the end of the runway, it seems as though it may hit the ground before it gets to the runway. It doesn't.

The student is shown how to taxi the plane back to the chocks. Next time he will have to do it.

His first flight is over. As he heads back for the hangar with his instructor, he feels good. He is even more eager for future flights when he'll be at the controls.

Returning to the hangar, they make an entry on the yellow sheet, and sit down for a post-flight talk. After this first flight the student continues to develop. On each flight he learns more and more about the handling of his plane.

FINALLY THE DAY COMES when he is considered ready for solo. The

CHECK OUT—Prospective pilot follows his instructor through pre-flight check out as he meets his first plane at the beginning of flight training.

classroom work is beginning to make sense, and he has developed confidence in his own ability to apply the things that he has learned.

Flight PSO-12: "Safe-for-solo."

This flight is taken with a different instructor—one who hasn't flown regularly with the student. Here's what the student does on his 12th flight. He must:

- Inspect the plane, start, warm up, perform cockpit check, and test engine correctly.

- Taxi safely and use brakes properly.

- Take off without excessive swerving. Use propeller, throttle, and landing gear controls properly.

- Recognize stall conditions and perform satisfactory recovery from induced stalls. Perform, to the instructor's satisfaction, slow-flight procedure, spins, steep turns, and power-off spirals.

- Demonstrate proper procedure and good head work during high- and low-altitude emergencies.

- Execute safe full-flap and no-flap landings on the first third of a hard-surfaced runway.

- Demonstrate satisfactory drift correction in cross-wind landings.

- Execute a minimum of three landings, including one full-stop landing at a solo field. Make three solo landings if considered safe-for-solo by the check pilot.

- Make a successful approach and landing at base field and return to the flight line.

- Stop engine and secure cockpit correctly.

If the check pilot considers the student is safe-for-solo, he solos on his next flight. His solo flight is similar, but he is not required to execute spins, cross-wind landings, simulated emergencies, inverted flight, or acrobatics.

AFTER HE SUCCESSFULLY completes his solo flight, it is traditional for his classmates to cut off his tie. No man is ever so happy to have a perfectly good tie ruined.

For the next 15 flights at Saufley he learns precision flying. Eight of these are solo. A student is introduced to certain maneuvers during a dual flight and is then expected to fly them on following solo flights. It is hard work, but it's fun. He's flying.

He now begins to feel like a real aviator. He knows he has a lot to learn, but it is starting to come into focus.

During this precision stage at Saufley, students make an important decision, one that will affect their future training. They must choose the flight program they wish to follow. The alternates open are: multi-engine (land and sea); single engine (jet or propeller); or helicopter. For immediate training, however, students are channeled into either jet or propeller-driven planes.

AT THE END of the precision stage at Saufley, the students move again—to another basic flying course and yet another base in the Pensacola area. For 95 per cent of them it is NAAS Whiting Field, located near Milton, Fla., about 15 miles away. The other five per cent move to nearby Forrest Sherman field to start training in the T2V *Seastar* jet trainer.

But before we leave Saufley, let's look at 14 men who are making Navy jet training history. In the past, every jet pilot has first learned to fly in a propeller-driven plane. These 14 men, however, started basic flight training in a jet plane. It is part of an experiment in which the Navy hopes to find out which method produces better jet pilots most economically.

To start this evaluation program, men were picked from volunteers in the Naval Cadet program, the Aviation Officer Candidate program, and the Officer program.

These first-class members are helping to keep the New Navy up to the

ALL HANDS



minute: ENS P. R. Battenberg; NavCad J. R. Damerom; ENS D. D. Harvey; NavCad K. A. MacDonald; 1stLT R. S. Robertson; NavCad R. W. Vandergrift; NavCad R. F. Warren; NavCad R. R. Bauer; NavCad E. R. Clark (he was the first Navy primary jet student ever to solo in the jet trainer); NavCad J. R. Kilianski; ENS C. W. Lafferty; 2nd LT G. D. McLaughlin; 2ndLT K. S. Smith; and ENS D. D. Young.

The new program means hard work for the instructors. They have to teach in new planes and they've had to develop a new training syllabus. The academic training includes much that is given to propeller pilots, with certain adaptations for jet planes. The students are expected to fly about the same maneuvers in the jet planes as their counterparts do in prop-driven planes.

In the pre-solo stage, students fly the TT-1 *Pinto* on 19 dual flights before they solo. Propeller plane pilots make only 12 pre-solo flights.

The first time up in the jet trainer seems to 'shake' nearly every student. NavCad Joseph R. Kilianski of Morgantown, W. Va., is typical. "I don't know quite how to explain it. I was nervous. I didn't know what to expect. But it was just great. You can't beat jet flying."

ENS C. W. Lafferty, USNR, an officer student from Covington, Ky., remembered it this way. "It seemed too much to handle. There were so many things to remember." But he did.

From Sauflay, the all-jet trainees go on to Sherman Field for additional training in the T2V.

THE MEN TRAINING in propeller planes have gone from Sauflay to Whiting Field. There they graduate to a different propeller-driven plane—the T-28 *Trojan*, or "the big bear," as it is known to students.

For the students, it's one more jump. "Before we started to fly the big bear, we spent about a week learning about the plane," commented Lloyd G. Pool, NavCad from Miami, Fla. "During our transition from the T-34 to the T-28, we flew nine hops."

Whiting is divided into two fields, North and South. At North Field is Basic Training Group 2. Here, besides the transition to the T-28, all students receive instruction in precision flying and acrobatics. For this, they spend eight weeks and fly 26 flights. But flying is what the stu-



BLACKBOARD SESSION—Aviation students get some fine points on precision flying. By the end of 15 flights they must be able to perform many maneuvers.

dents like. When it rains, or the weather is closed in, the regular schedule of half day on the ground and half day flying is interrupted.

On those bad days the students attend foul weather lectures, safety lectures, and learn what is ahead of them in the training. "We have to be careful not to give them too much of this," commented one of the instructors. "It's a waste of everyone's time if they aren't getting any good

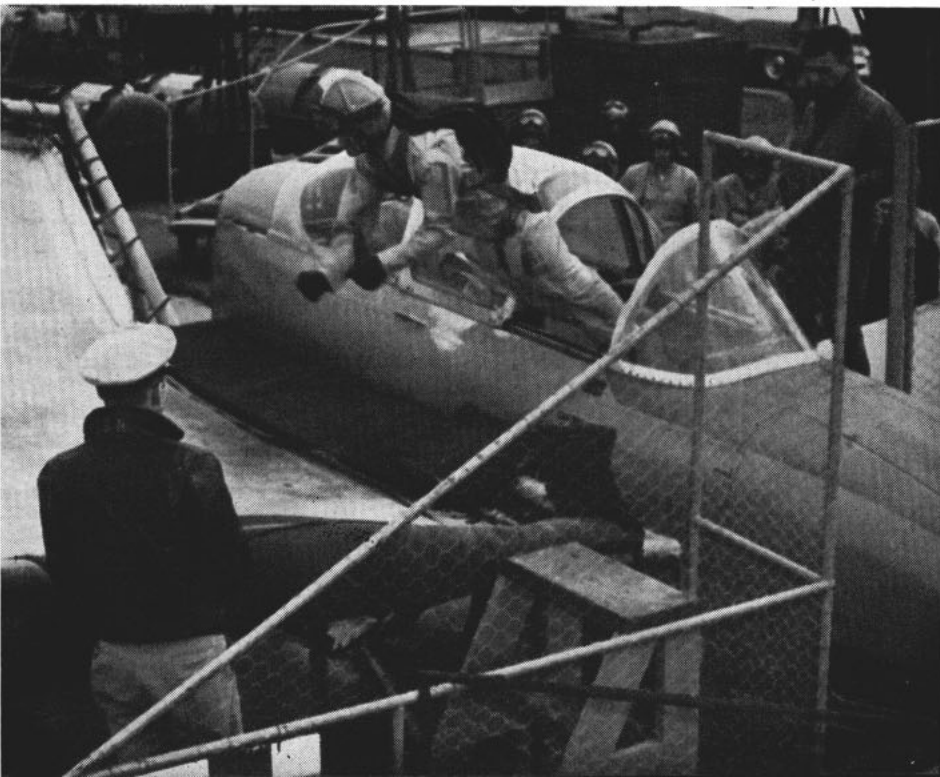
out of the lectures."

Through both the transition and precision stages, the students do maneuvers they had previously flown in the T-34 trainer.

During 10 acrobatic flights they fly four dual flights. On the remaining flights they practice loops, barrel rolls, precision spins, wing-overs, half-Cuban 8's, Immelmann turns, stalls and spins.

They're ready for the next hurdle.

OUT YOU GO—Students line up for their turn at Kiwi, the bail-out trainer at Sauflay Field. It was named after the New Zealand bird that doesn't fly.





about 10 feet behind the plane ahead.

On the first dual flight in formation flying, they rendezvous to the right of the lead plane. First they make position turns, then break-up and rendezvous. Gradually they work up to a four-plane formation, with each plane on a 45-degree angle from the one ahead.

This is flying the men haven't seen before. This is working as a team. Until this time they have worked alone in the air. Now they must keep their eyes on the man ahead. That's where instructions will come from. And for the most part, the instructions are visual. Rarely does the squadron leader give instructions over the radio.

NEXT TASK is day and night navigation. Up to now the men have flown only in the general vicinity of the base. They have become familiar with the landmarks and have had very few navigational problems. Now they are confronted with something different.

Trainees fly their *Trojans* on two

Pipelines: Props, Copters

FROM THIS POINT, the flying starts to become specialized (according to the future flying plans of the students). Still in Basic Training Group—BTG 2—at Whiting North Field, they start courses in either jet or propeller-driven planes.

Jet students aim for high performance jet attack or fighter aircraft in Fleet squadrons. Those who choose the prop course look forward to Fleet duty in antisubmarine, patrol or attack aircraft.

A choice of courses is given, according to class standing and the needs of the Navy. Men who will fly propeller planes remain in BTG 2 for another six weeks. During that time they continue the half-and-half routine between the classrooms and flying. They practice basic instruments, radio instruments and night familiarization. Twenty-three flights are involved. Three of these are at night. Two of the night flights are solo.

DURING INSTRUMENT FLIGHTS, the student pilots—after they have worked many times in the link trainer and blindfolded in the cock-

pit familiarization cockpit—must taxi their plane, take off, land, and do certain other work in the air.

After finishing the instrument flying phase, the propeller trainees move to South Field for formation flying, and day and night navigation.

The jet pilot trainees have already moved to South Field, where they fly the T-28. Instead of six weeks' instrument and night flying at North Field, they had two weeks. They flew five dual flights in the T-28, and then three night familiarization flights.

For both the jet pipeline and the prop pipeline pilots at South Field, the program calls for formation flying and day and night navigation in the T-28. The jet students fly 19 flights. The prop boys fly 17. Jet trainees are sometimes given training in aerial gunnery here.

Up until this point student naval aviators have been told to stay away from other planes. Now it's different. They must fly in parade formation at a 45-degree angle from the plane ahead with only 65 feet between corresponding parts. In this position, they are about 10 feet below and

solo day navigation flights. An instructor follows in another plane. On the second hop, four student pilots fly cross-country to a designated airport, land, refuel, and return. They alternate as squadron leader.

The night navigation stage is similar. Students fly two cross-country flights over a prescribed pattern. They fly over designated check points at a previously assigned altitude, and two-way communication is mandatory. On the day navigation flights, the radio is not used.

When these stages are completed, jet trainees have been at South Field for eight weeks. The prop students' course, covering about the same subjects, lasts six weeks.

Both groups return to Saufley Field for the next phase of the training—aircraft carrier landings.

THE CQ (carrier qualification) stage of both aviation training pipelines is identical. This means 14 flights and three weeks at BTG5.

Nearly all the flying in this stage is done *below 200 feet*, and at speeds close to a stall (78-80 knots). At these low altitudes, the student real-

izes a stall could mean disaster.

One of the first men these students meet is the LSO (landing signal officer). He controls the actual landings aboard a carrier.

For 13 hops students learn to fly low and slow and to land in an area the size of a carrier flight deck. Bronson Field, near Saufley, is marked off in areas of this size.

The students get their first taste of the short field on the first hop. It is a demonstration flight. With the instructor piloting from the rear seat, they make eight FCLP (field carrier landing procedure) passes, and practice flying at slow speeds.

The next hop is solo. A student practices what he was shown during his first dual hop. On the third flight, he is again joined by his instructor. This is his first business meeting with the LSO, and a "safe-for-solo" flight in field carrier landing procedures.

THEN ON FLIGHT NUMBER 14, he actually lands aboard a carrier.

He leaves Saufley Field and heads for USS *Antietam* (CVS 36), which is underway in the Gulf of Mexico.

and Jets

As he approaches the floating airstrip, his first sensation is the smallness of the ship from his vantage point.

As he heads in for a landing, he slows to about 80 knots, his eyes fixed on the LSO as he comes in just 15 feet over the deck.

When the LSO gives the signal, the student cuts his engine.

The plane drops to the deck. The low hanging tail hook catches the arresting wire and the plane is dragged to a halt.

Five more times this is repeated by the student before he qualifies.

For LTJG Dick Newell, an AOC, who had made the usual field landings at Bronson, the landing aboard *Antietam* was almost routine. For others it was more exciting.

To most, it is the end of their basic training. For the rest, they have one more step to go before moving to advanced training. Now the paths begin to separate further:

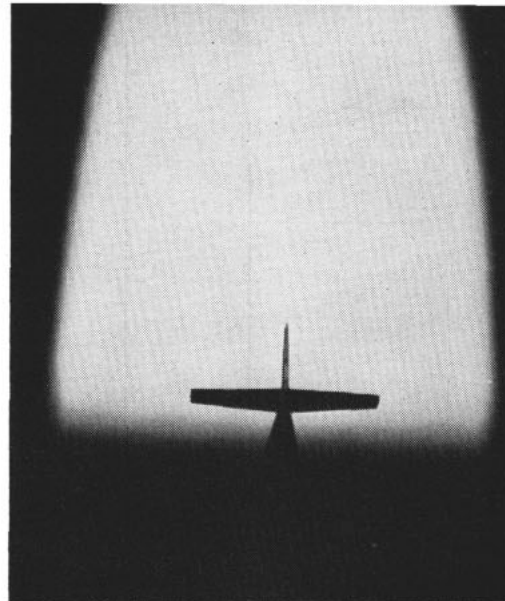
- The jet trainees are off to Memphis, Tenn., for six weeks' additional training in basic and radio instruments. At Memphis they will fly the jet T2V *Seastar*. This will be their first training in jet aircraft.

- Most of the prop men go directly to Corpus Christi, Tex., for training in either VS (they will fly S2F) or VA(P)/VP (they will fly the multi-engine SNB).

- For one small group, it's helicopter training. These men stay in the Pensacola area, but move to nearby Forrest Sherman Field for 12 weeks. They, too, will fly the SNB, a Navy multi-engine trainer, before taking helicopter training.

ANOTHER GROUP, however, is still working in basic training. Remember those men who left the training pipeline after Saufley and started jet training at Sherman? The course there is 25 weeks. They still have four weeks to go.

These men have been studying much the same material and flying the same maneuvers that the others have been carrying out in the pro-



AIRBORNE—Flight students soon get familiar with their plane and the sky that is their medium for travel.

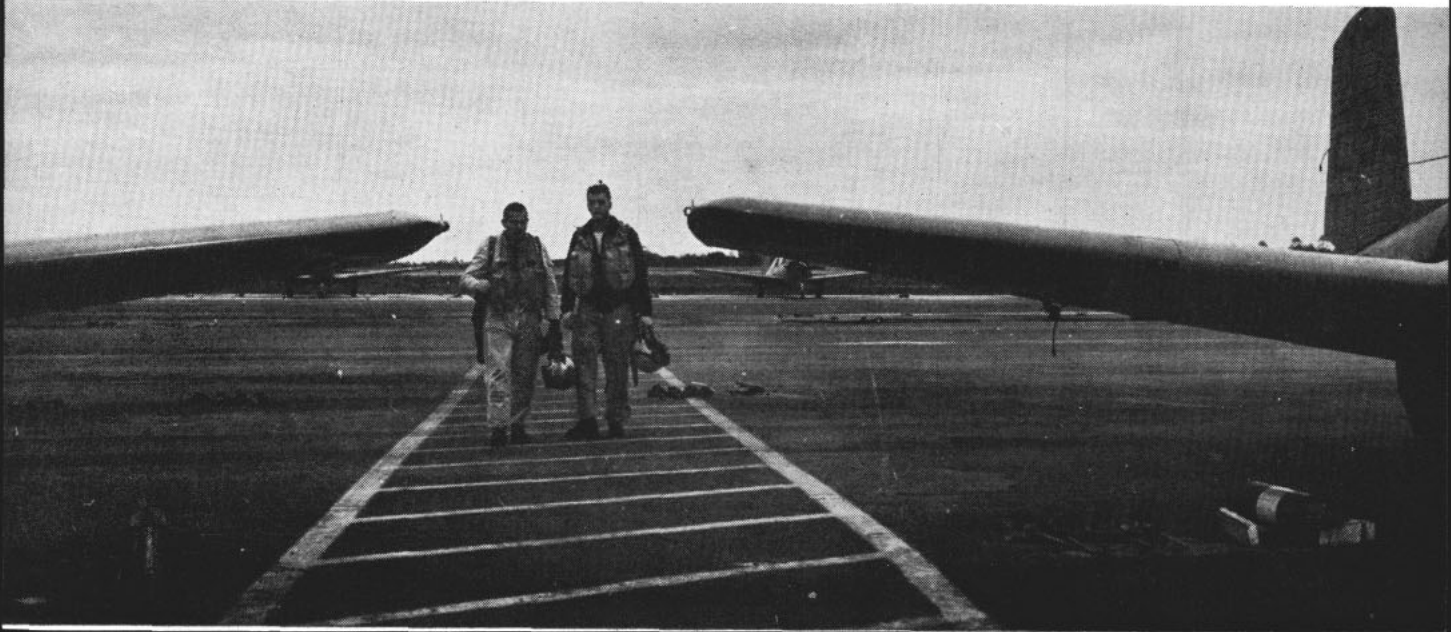
peller-driven planes.

Besides flying the 500-knot-plus T2V for about 120 hours, however, they have continued in the classroom with aerology, communications, engineering, principles of flight, special weapons, customs and traditions, and history of world sea power.

At the end of their 25 weeks at Sherman, they move to Corpus Christi, Tex., for advanced jet training. They have already received basic instrument training in the T2V at Sherman. They bypass the instrument training being taken at Memphis, Tenn., by those jet trainees who had flown the T-28 at Pensacola.

FOR THOSE MEN who go to Memphis, there is another big change. For the first time, they fly a jet plane. In this case it is the T2V. (The T2Vs

BACK TO EARTH—Student and instructor walk down striped safety lane after a flying lesson in the Florida sky.





ON DECK—Pilot-to-be makes a pass at carrier's flight deck while receiving signals from the plane director during carrier qualifications at sea.

are being phased out of the program both at Memphis and Sherman Field by the T2J.) During six weeks at Memphis, students fly 20 hops. Ten of them are in basic instruments and 10 in radio instruments. Transition flights and basic instrument flights are flown simultaneously.

In basic instrument training, students perform difficult maneuvers, using only instruments. Later in the radio instrument stage, they apply the knowledge already gained by flying from point-to-point solely by instruments without referring to the ground. Earlier, as you remember, they had used ground check points for flying cross-country.

Every flight at Memphis is with an instructor. No solo flights are

flown. For these men, it is the end of basic training. Then, it's off to Corpus Christi for finishing touches.

THEN THERE ARE the whirly bird pilots, who remain at Pensacola. These men must train in multi-engine aircraft, as a prerequisite for helicopter training. This is the only group trained at Pensacola that doesn't move to Corpus Christi for final training.

The future copter pilots spend 12 weeks at Sherman learning to fly the SNB. At the end of that time they are able to solo the plane and have become familiar with basic and radio instrument flying. They have also flown cross-country.

Completing their 12 weeks, they

move on to the last step in their quest for the Wings of Gold. Ellyson Field, in the Pensacola area, is the final phase of the training for the chopper boys. Here the accent is on flying. Very little training in any special phase of work in helicopters is stressed. That is left to the squadrons into which these men will go after they get their wings.

"Flying a helicopter is like flying fixed wing aircraft by instruments." That's the comment you hear from the copter student.

Almost every imaginable maneuver is taught in the whirly bird. And the hardest thing to teach, confided one instructor, is to hover. Although this is the main attribute of helicopters, it is difficult to master.

After finishing the 60 hours of flying at Ellyson, the men are ready for graduation. This means a commission as Ensign or 2nd LT for NavCads and Wings of Gold for everyone. It's a proud day.

Rear Admiral Joseph M. Carson, USN, Chief of Naval Air Basic Training, is there to give out the wings. Each student usually has his parents or some special guest to pin on his wings.

The ceremony is short. Admiral Carson hands over the wings. The guest pins them above the pocket.

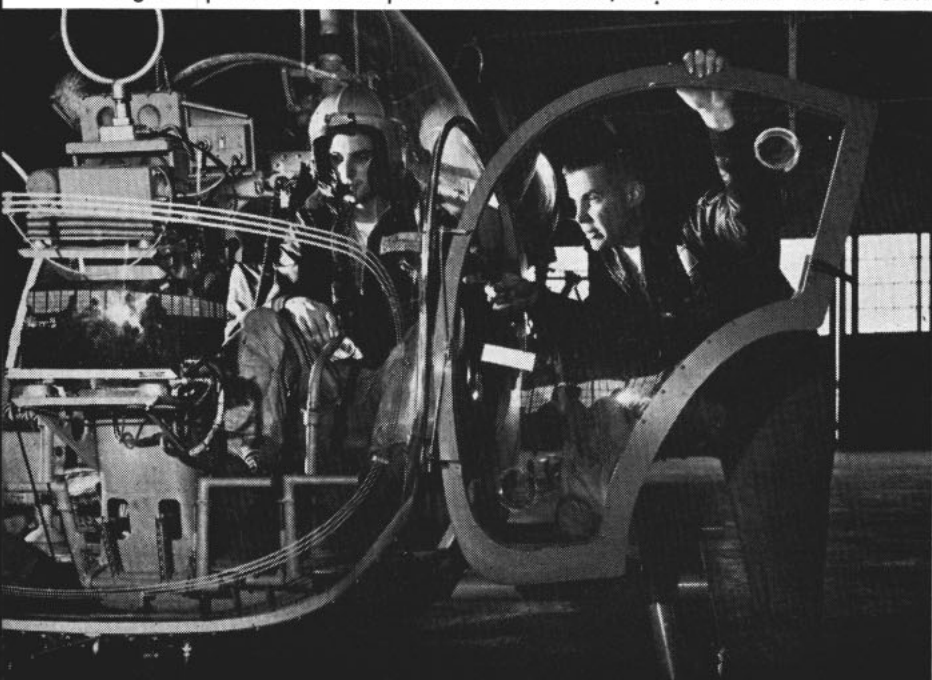
Now it's official. "It feels terrific," says ENS Roger Hulson, USNR, a former NavCad. "And it's a wonderful feeling to be able to fly confidently. Right up until that last flight I felt just a bit unsure of myself. Then on the last flight, everything seemed to come into focus. I felt that I really had it then."

AND SO IT GOES. Every person who receives his Wings of Gold could tell his own story—a story filled with excitement and hard work. Each would highlight a different part of the training.

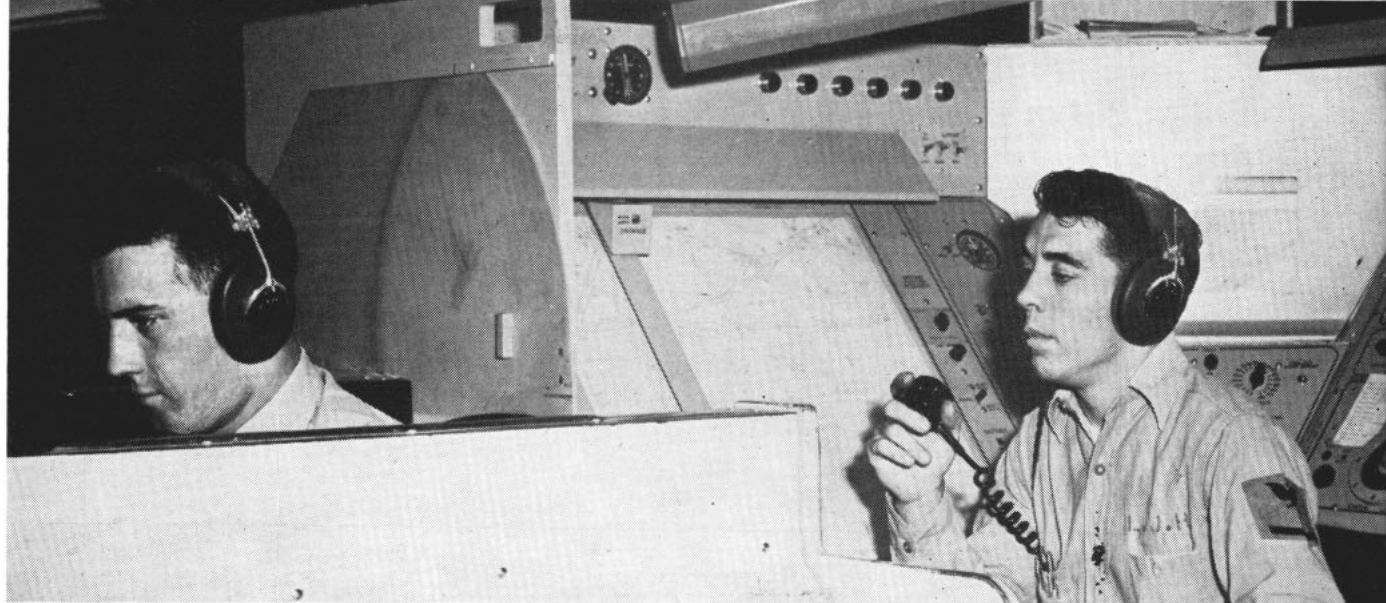
But they all tell one story, however—that of hard-working instructors, training surpassed by none, and a confidence that no man can take away.

These helicopter men are now naval aviators. They are part of a proud and highly skilled group. They are, by the way, the only group who ever receive their Navy wings at Pensacola. For most students, however, Pensacola is a stepping stone. For them Corpus Christi is where the finishing touches are put on and where the wings are passed out.

—Erwin Sharp, JO1, USN.



TAKE YOUR PICK—As flight training progresses choice between jets, multi-engined planes or helicopters is made. Here, copter trainee checks craft.



LIKE REAL — Link trainer teaches jet control handling to student pilot while Trademan gives flight orders.

Tough, But Tender

ALL FLYING NIGHTMARES such as iced wings, becoming lost over the ocean, disabled instruments, engine failure, fuel trouble or an inoperative radio can be simulated on stationary trainers now being used to train student naval aviators.

These training devices can duplicate almost every situation a jet or conventional airplane could encounter, without danger to pilot or plane.

In the basic instrument trainer, for example, a pilot can practice instrument landings, ground control approaches, direction finding, and primary instrument training.

Operating a trainer is also much less expensive than flying an airplane. One hour's operation of a flight simulator costs the government about \$2 for electricity. The fuel for a conventional trainer-type aircraft would cost \$10 to \$150 an hour.

At NAAS Kingsville, Tex., a new Navy Link Trainer for the F11F "Tiger" jet plane is now in use.

The trainer, aside from being the first model for F11F instruction, is also the first Navy flight simulator to operate on direct current. All previous ones have operated on alternating current. This new development has proved to have many advantages of actual flight simulation and ease of maintenance.

The new trainer is mounted in a 40-foot trailer which weighs 21 tons. The trailer contains a student cockpit, an instructor's station, and racks of electronic equipment necessary to operate the trainer.

The trainer cockpit is identical to the actual one in the F11F. The only deviation from normal appear-

ance is the diffused canopy which seems to have a coating of soap over its surface. This diffusion is accomplished by spraying the canopy with a compound similar to that used to mothball ships and aircraft. When used in this way, however, it serves an entirely different purpose.

When the pilot is in the trainer during flight simulation with the canopy closed, lights of varying brightness are flashed on and off, bright and dim, to give the illusion of flying through cloud patches. A single naked bulb giving off intermittent flashes of light gives a vivid imitation of lightning flashes. The diffused canopy turns these flashes of light into reproductions of these different flying conditions.

As the pilot continues his simulated flight, the trainer and all instruments react exactly as an aircraft would under a pilot's guidance. The cockpit moves up and down, or banks, or pitches, and the fuel gauge moves toward empty. Each instrument gives an accurate indication to help a student ready himself for a new plane. An added effect of realism on the landing approach is induced as the pilot lowers his gear for a landing. In normal aircraft operation, landing gear comes out hard and fast. It gives a heavy thump that can be felt by the pilot. This action is accurately imitated in the trainer.

A great advantage of a flight simulator is the ability to reproduce engine operating conditions that would be impossible to induce in a live engine without danger to the engine, aircraft and pilot. Some of



TRAINER operator gives OK to land.

these are ignition failure, compressor surge, engine overspeed, bleed valve stuck open or closed, engine icing, flameout and air start, and engine seizure.

By meeting these conditions in a simulated flight, the pilot will be better prepared to face the many emergencies which could arise in the course of an actual flight.

Today's student naval aviators receive a minimum of five hours' instruction in this trainer before they actually fly the F11F.

PILOT checks his simulated plans.



Prepare for CRASH — in Training

Fittingly enough, since the Dilbert Dunker is devoted to the somewhat grim business of survival, it is not a glamorous piece of gear. But it is efficient.

It consists of what looks like the cockpit of an actual plane, sawed off square at the bulkhead fore and aft. The windshield frame has been retained, but the plastic has been knocked out. The former instrument panel has been heavily padded. The whole job is painted a bright, fire-engine red. It has to be repainted often to withstand the strain of countless duckings.

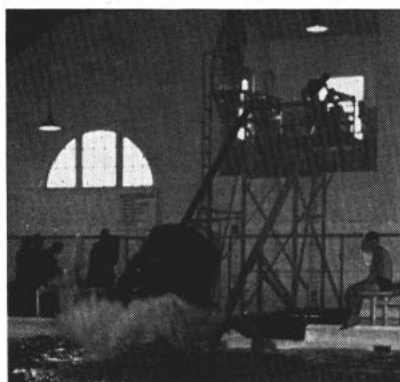
Although there is a Dunker at just about every naval air station, the one at Pensacola is unique. Under the guidance of Instructor Jack Martin, who presides over Training Tank One, every pre-flight student makes at least one successful voyage in the Pensacola Dunker. It was Jack Martin who also nursed the ALL HANDS neophyte through his plunge, which is described here:

IT MUST be mentioned that the outfit you wear—when introduced to Dilbert Dunker—is designed more for utility than comfort or beauty. First, a pair of swim trunks, then a pair of wet, cold, and clammy pants and shirt recently shucked by a preceding student. After pouring the water out of a pair of sneakers, you put them on.

“Even though we’ve padded the inside of the cockpit as well as we can,” explains Instructor Martin, “you’ll get your feet cut up a bit if you don’t wear these. Of course, in a real plane and a real situation, there will be more possibilities of getting cut. But you’d be wearing more clothes.”

Meanwhile, he was getting me into a lifejacket and parachute pack. While he checked my chute, he did not forget the old gag about this guy “Buaer” getting around almost everywhere. It did much to make me feel at home and recalled to me the days of my youth. Some things never change.

“But this pack is a little different from standard issue. It won’t do you much good up in the air, but here it works fine. Instead of containing the regular nylon parachute, we’ve put a block of wood in it. We’ve found it has the same specific gravity and we don’t have to replace it quite



so often. A parachute will keep you afloat for about five minutes—or until it becomes watersoaked—and then will sink like lead. You can’t possibly sink with this. And, if you get into trouble, we most certainly can get to you within “—he smiled when he said this—” five minutes.”

ME GET INTO TROUBLE? Never! Nevertheless, what with all the wet clothing, the lifejacket and parachute gear dangling behind and below me, it was a little difficult to move and it was nice to be reassured that there was no possibility of sinking. It didn’t feel that way and I was happy to recall that they didn’t do it like that in the Old Navy.

Viewed from the far end of the pool, the Dunker is not terribly impressive—at first. As you approach nearer, its aspect changes. In its take-off position, it is poised at the top of a two-railed track about 20 to 25 feet above the surface of the water. A vertical ladder leads to a platform alongside the Dunker. After its descent, the Dunker is retrieved by a cable attached to its rear end, which leads to a small motor mounted at the top of the incline.

A heavy shock cord is attached to the Dunker’s front end. This is to snub its forward motion when it hits the end of the rails and also to make sure that it flips the Dunker over properly. The rails descend into the water at about a 45 degree angle.

A boatswain’s mate stands on the platform to make sure you are seated properly, lifebelt properly secured. When all is ready, he presses a buzzer.

That releases the Dunker. Away you go into the wild blue yonder. I was introduced to the boatswain’s mate, but I had other things to think about and regret to say I don’t re-

member his name. My apologies. I can remember faces real good but names always elude me.

MARTIN broke into my train of thought. “Remember everything you’re supposed to do? Good. Go right on up. Good luck. Just remember that thousands of men have done it before you and they survived. You’ve got nothing to worry about.”

True, but this was me. Weighed down as I was with gear, the ladder presented a considerable obstacle course in itself. About halfway up, it occurred to me that I could get out of the whole thing if I just happened to miss a handhold. If I were to land in the hospital, they couldn’t really expect me to go through with this business.

While I was pursuing this brainstorm, I reached the top and, to my surprise, found Martin standing there waiting for me. I’m still not sure how he got there so rapidly.

From the floor, the Dunker didn’t seem to be much but, standing beside it, it was of respectable size. My most immediate problem, loaded down with gear as I was, was to throw a leg over the side and climb in. I made one or two feeble attempts when Martin suggested: “Why don’t you use the step? Most people do. It’s a lot easier.”

Once in the cockpit, I couldn’t figure out what to do with the parachute pack. “It’s a seat,” said Martin patiently. “Why don’t you try sitting on it?” I did, and was glad to discover that it fitted the seat perfectly. I made some light remark wondering whether this was the way they did it in the Old Navy. My question was ignored as they threw two straps over my shoulders and down through the seat belt.

“You may feel a little constricted now, but I assure you they won’t get in your way at all. When you hit the water, all you have to do is release the safety belt and the whole thing will come clear. Keep your right hand on the stick and don’t forget to hold your left arm in front of your face. . . . That’s all there is to it. All set?”

I WOULD HAVE liked a day or so to think it over, but they mistook my blank look for one assent, because I heard the buzzer.

The Dunker stood poised for one

Tank One

awful second and, before I could tell myself: "This is it—this is really living," the whole contraption gently leaned forward and went down faster and faster.

Next thing I knew I was hanging upside down in the cockpit in the water. I guess I was so surprised I must have hung there for several seconds without functioning at all. Then I began to remember my instructions. Your natural instincts tell you to claw madly straight upwards. Your only desire is to get out of there—quickly. This, however, is the point of the whole Dunker technique. It teaches you *not* to do this. If you do what comes naturally, you will be drowned like a rat in a trap.

I didn't have time to feel wet nor, although I don't remember having taken that deep breath before I hit, did I run short of air. Maybe I forgot to breathe; I don't know.

I did count to three, but not as slowly as I had been instructed. I opened my eyes and was glad to see that I was all there and that the situation was just as I was told it would be. I was hanging upside down in the cockpit and the Dunker was slowly settling.

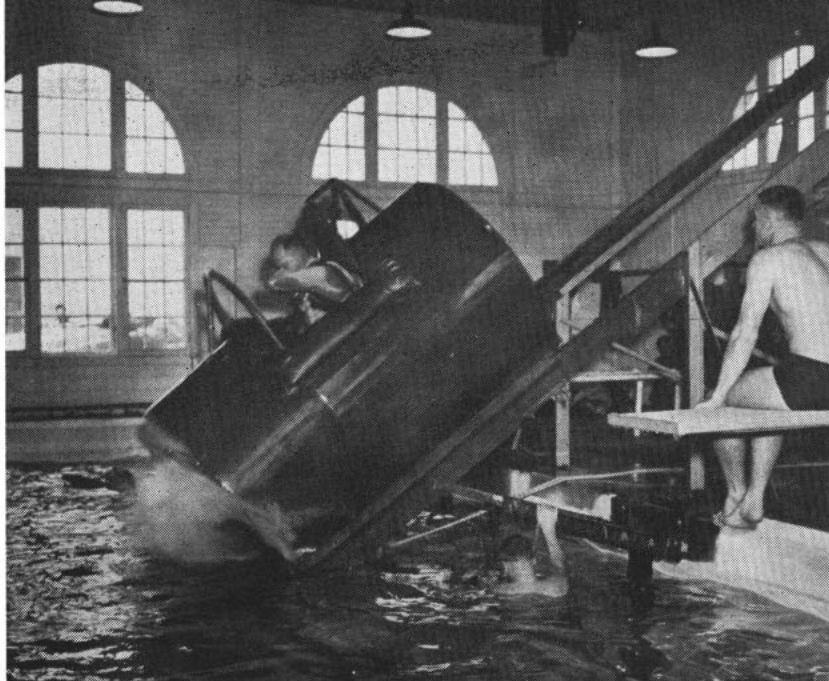
STEP ONE WAS, reasonably enough, to unhook the safety harness. Then, according to the instructions Jack Martin had pounded into my head (and the head of every student who goes through Pensacola), I grabbed the windshield and pulled downward *hard*. Then, as soon as I was clear I was supposed to shoot up at the side to the right at 45 degrees.

I suppose I must have done as I was told, because I did hit the surface of the water promptly (but I came up on the wrong side). I struck out briskly for shore—in this case, the side of the pool. The parachute pack was no handicap at all. If I had been dragging an anchor, it wouldn't have slowed me up.

That's all there is to it.

Why is the Dunker of such importance? Because it helps to save men's lives. Before the introduction of the Dunker in 1943, approximately 95 per cent of the Navy pilots who went down over water were fatalities.

Today, largely because of the Dunker technique, the loss of Navy pilots who crash in the ocean has been reduced to a fraction of that figure.



DILBERT DUNKER trains Navymen with a splash. Below: Instructor gives an OK.



AND ON



CONGRATULATIONS—Student flyer is given hand-shake by OIC after completing his first flight in F11F Tiger jet. His wings of gold are near.

From Pensacola, the Wings of Gold story moves on to Corpus Christi. The following material on Corpus Christi was made available by the Naval Air Advanced Training Command.

IT IS DOUBTFUL whether there is a single pilot in the Navy who hasn't at one time or other landed at Corpus Christi. He either took flight training there, or he's stopped off on cross-country hops.

To these men, the Naval Air Station at Corpus Christi represents the very best that naval aviation has to offer.

The station itself, known as the home of the Naval Air Advanced Training Command, is comparatively young so far as Navy installations go. On 12 Mar 1959 it had its eighteenth birthday.

Much has happened in those 18 years. Many changes have taken place. Thousands of men have come here for training, have completed

that training and have gone.

With the exception of helicopter pilots, who receive their wings after training at Pensacola, Fla., all other prospective naval aviators leave Pensacola with nothing but a vision of Wings of Gold faintly visible on the horizon. The vision comes one step closer to reality when they report to NAATC Corpus.

When the first group of 52 cadets arrived at the station on 20 Mar 1941 (only eight days after the commissioning ceremonies) they were greeted with the noise created by riveters, carpenters, bulldozers and tractors. Ground school started for the new students on the first of April and the "University of the Air" was in session. This Naval Air Station was soon to be referred to as one of the largest and finest in the world. It has expanded from 2050 acres to more than 6800.

FROM THE BEGINNING, training of pilots was extended and con-

ducted with such vigor that before World War II was over, more than 35,000 men had completed their training and received their wings of gold. Several thousand additional naval aviators have completed training in the Corpus Christi area since World War II. Hundreds more are at present working for their wings.

The march of time has been measured off at NAS Corpus by the disappearance of old planes, and the appearance of the new. When VO-type planes were taken off battleships and cruisers, all VO training stopped; in March 1949, the SU2s were retired. Jet training commenced in the Advanced Training Command in mid-1949 when the first TO-1 Shooting Stars, reached Corpus Christi.

That same year the Blue Angels, the Navy's world-famous flight demonstration team, moved into jets and their home base was changed from Pensacola to Corpus Christi. Although deactivated during the Korean conflict, the Blue Angels were reactivated in 1951 and remained at Corpus until July 1955 when they moved, in their F9F-9 Cougars, to Sherman Field.

Training in the south Texas area is now in three types—jets, anti-submarine, and seaplanes. The TV-2s, ADs, S2Fs, F9Fs, SNBs and P5Ms are a far cry from the "Yellow Perils" of the early days. But the mission is the same.

Whether the student chooses single or multi-engine training, it all leads to the same thing—those wings of gold.

The Training Department at NAS Corpus administers and coordinates all formalized aviation training that is conducted. The advanced training units (ATUs), the academic training division and the training aids division are an integral part of the Training Department. These units and divisions provide direct support to the various phases of the training program.

The "book learnin'" of student naval aviators in the four ATUs aboard the station is the responsibility of the academic training division. Shortly after being assigned to a class in one of the units, the student plunges in. The subjects he tackles are instruments, survival,

TO CORPUS CHRISTI

ordnance, engineering, electronics, navigation, amphibious warfare, antisubmarine warfare, aerology, communications and naval orientation.

IF HE'S A PROSPECTIVE attack pilot, he's assigned to ATU-301 at NAS Corpus.

On completion of the advanced instrument course he flies the AD *Skyraider*, single-engine carrier plane. At ATU-501, he receives co-pilot training as well as extensive navigation training in either the P5M *Marlin* seaplane or the P2V *Neptune* landplane.

Prior to training at ATU-501, the prospective patrol pilot receives instrument training in SNB two-engine landplanes with ATU-601, followed by navigation and flight proficiency training in ATU-611, which uses the S2F *Tracker* aircraft.

Here's a rundown on the ATUs.

• **ATU 601**—In line with changes in the Multi-Engine Training Program, Advanced Training Unit 601 was activated on 1 Feb 1958 at NAS Corpus. The mission of this unit is to provide the full treatment in instrument flight procedures for all prospective multi-engine pilots. Upon

satisfactory completion of the unit's syllabus, as a graduation present each student pilot is awarded a "Standard Navy Instrument Rating" or "White Card," as it is commonly called.

ATU-601 has about 80 flight instructors. These men are all experienced pilots with at least one tour of Fleet duty behind them. To provide the optimum in training and to maintain a standardized syllabus, instructors complete a comprehensive flight and ground syllabus of their own before receiving students for the first time.

Each student receives seven weeks of instruction while attached to ATU-601. During most of this time he flies half a day and attends academic training the other half.

Once the students are assigned to an instructor, they remain with him until completion of the course of instruction within the unit. This not only allows each instructor to know his students well but helps him provide a much better training. The aircraft currently in use is the Navy's proven multi-engine instrument training, the SNB.

• **ATU 611**—A second multi-engine training unit, designated ATU-

611, was commissioned at Corpus a month after the birth of ATU-601.

Students entering ATU-611 from ATU-601 receive 11 weeks of training in the S2F *Tracker*. They also get navigation and flight proficiency training.

Future naval aviators get more out of their training at the unit than just the ground school and flight courses.

They build up confidence in themselves in their solo work, field carrier landing practice and their first actual multi-engine carrier landings on the aircraft carrier *uss Antietam* (CVS 36). They begin to see for the first time actual results of their flight training.

And those wings of gold are nearer.

Graduating from ATU-611, the students enter ATU-501 as field and carrier qualified pilots.

• **ATU 501**—Advanced Training Unit 501 plays an important role in the training of student pilots before joining a Fleet squadron. Here students receive co-pilot familiarization training in the P5M *Marlin* seaplane and P2V *Neptune*, along with 72 hours of in-flight navigation training. ATU-501 trains pilots for the Fleet.

FINAL STEP—Jets fly formation over administration building at Corpus Christi, Tex., symbolic of wings to come.





FOR SAFETY'S SAKE—Flight instructor of ATU 213 goes over yellow sheets with advanced students to check the plane's performance after their flights.

It also trains pilots in navigation techniques used by all multi-engine aviators.

First there's a week of ground school, consisting of engineering instruction in the P5M or the P2V. Then there are a couple of four-hour co-pilot familiarization training flights, in either of the two planes.

Now they start their in-flight navigation training. They're really on the way, with two six-hour day-night navigation flights in the R4D. Twenty-four hours more of in-flight navigation in the "type" aircraft—and they'll be flying with the Fleet. This 24 hours of navigation consists of navigation and ASW flights to familiarize students with the current Fleet ASW doctrine.

To get them really "indoctrinated," they get an introduction to adminis-

HERE YOU GO—Advance student awaits assignment by unit officer.



trative functions similar to those they'll encounter after reporting to the Fleet squadron, including collateral duties held by naval aviators throughout the Fleet. Graduation from this unit earns the student pilot his wings.

• **ATU 301**—Not all of the students move into ATUs 611 and 501 to get their wings. Some complete their training at ATU-301. The one single-engine prop plane training unit in the command, it readies its attack pilots in the AD *Skyraider*. With more than 53 of these planes, it can boast of better than 70 per cent availability owing to excellent maintenance.

The flight syllabus is approximately 14 weeks long and includes seven phases: familiarization, formation flying, bombing and strafing, tactics and acrobatics, navigation, simulated and actual carrier landings, and AD instruments.

Three students and an instructor team up to form a "flight" and advance through the syllabus together. All flying is solo. This is the first solo work the ATU-301 student receives in the advanced training command.

On graduation from the unit they receive their Navy wings of gold—then head for an attack squadron in the Fleet.

Kingsville Naval Auxiliary Air Station

Flight training aboard the Naval Auxiliary Air Station, Kingsville, Tex., is accomplished primarily by three Advanced Training Units utilizing experienced naval aviators instructing in Fleet type and trainer type aircraft.

Fleet type aircraft currently being used are the F9F-5 *Panther*, F9F-8B *Cougar* and S2F *Tracker*. The trainer now in use at Kingsville is the popular F9F-8T *Cougar*.

Another unit, for the present in an

evaluation status, will, in the future, give advanced training in the F11F-1 *Tiger*, a Fleet-type aircraft. Students reporting aboard are those who have just completed basic training at Pensacola, Fla.

NAAS Kingsville first came into being in the fall of 1941, when a group of civic leaders suggested that having a desirable climate and scarcely populated area, Kingsville seemed extremely suitable for a military airfield, bringing with it mutual benefits for both the military and civilian community.

Pearl Harbor resulted in renewed and vigorous efforts to establish the station. A farmland site of 3000 acres was purchased and construction begun. Buildings began to spring up overnight as construction crews worked around the clock. On 4 Jul 1942, NAAS Kingsville was commissioned. It has become known as the major auxiliary air station in the Naval Air Advanced Training Command.

Today, NAAS Kingsville has expanded from 3000 acres to more than 5000. Further expansion and new construction continues. Recently, two new air-conditioned enlisted barracks were opened. Also in operation is a new air-conditioned mess hall. Construction will soon begin on two more EM barracks.

Runways aboard the station have been lengthened and a larger, more modern hangar, now constructed, will open soon.

• **ATU 402**—Advanced Training Unit 402 trains student naval aviators in the S2F *Tracker* ASW aircraft to prepare them for Fleet anti-submarine squadrons.

The student who receives his wings after completing the ATU-402 syllabus is an all-weather qualified naval aviator who has flown approximately 158 hours as pilot, has 48 hours of instrument time and 13.5 hours of night flying.

In addition to his flying, he has completed three weeks of academic training in naval leadership, military courtesy, naval orientation, communications, aerology, ASW and other subjects.

ATU-402 emphasizes safety, whether flying or operating on the ground. When the student reports aboard the unit, he is shown the safety record and is reminded that his predecessors worked hard to obtain this high standing. This is also the time that the Safety Officer ex-

plains the slogan of the unit to the student:

"Flying in itself is not inherently dangerous, but it is mercilessly unforgiving of human carelessness."

• **ATU 212**—Jet student aviators reporting aboard for training at ATU-212 are a somewhat select group. They've just completed the VF/VA Basic Training Syllabus at Pensacola, Fla., the first step toward their wings. Now they'll be initiated into swept-wing jet aircraft and thoroughly trained in all phases of jet fighter training.

The training starts with jet familiarization and advanced instruments, followed by various flights in air-to-air gunnery, air-to-ground rockets, bombing, high- and low-altitude navigation and cross-country flying. As they advance, they receive fighter tactics and loft bomb maneuvers. The final step of the training is the carrier qualification aboard USS *Antietam* (CVS 36), the angle-deck ASW carrier based at Pensacola, Fla.

The course completed, the student is presented with his wings—and another thoroughly trained fledgling aviator is on his way to a squadron.

During this nine weeks at ATU-212, the student pilot flew approximately 140 hours in the *Cougar*, (F9F-8T and F9F-8B). He was a member of a unit which, in 1958, flew more than 29,000 hours with an over-all accident rate of 2.05 accidents per 10,000 hours. The officers and men of 212 are constantly seeking to improve the quality of training afforded the student aviators, bearing in mind that quantity is a secondary goal.

ATU-212 only recently received a full complement of swept-wing aircraft. Before that time, the TV-2 was flown. This syllabus was essentially Jet Instrument and Tactics. ATU-212 trained with the TV-2 for five years, beginning in 1953. The F9F-8 *Cougar* is expected to be unit aircraft for some time. At present, different syllabuses are being revised to include a final phase of training with the F11F *Tiger*.

• **ATU 202**—The mission of Advanced Training Unit 202 might well be compared to that of a graduate school. Just as in graduate school, students who arrive here have a sound foundation in the field of their choice.

The basic rudiments of driving a



WINGS AHEAD—Prospective naval aviator flies high out of NAAS Kingsville, Tex., while on advanced training flight that will bring him closer to wings.

flying machine around the sky have already been learned. The mission of 202, therefore, is not to teach, but rather to expose the students to advanced information. Admittedly, there is a fine line separating the two. However, the difference is significant in that the program offers a guide to learning rather than to push the student into it.

To accomplish its mission, 202 is currently operating two distinct syllabuses. The older syllabus (on the F9F-5 *Panther*) is nearing an end. It is basically a jet introduction and tactics course. In it, formation flying, gunnery, rocketry, bombing and navigation are taught and a number

of hops on instruments are made to maintain the proficiency gained in all-weather flight.

The newer syllabus is followed while flying F9F-8 *Cougars*. It includes all-weather flight. Other significant differences are jet carrier qualifications, loft bombing maneuvers and, of course, the basic one in which they are introduced to swept-wing aircraft.

• **ATU 222**—Advanced Training Unit 222, newest of the advanced training units, was established in December 1958 by the Chief of Naval Air Training to determine whether high performance aircraft such as the F11F *Tiger* could be

GETTING THE WORKS—An instructor points out the working components of an F9F-8T jet engine during academic training period at Corpus Christi, Tex.



used profitably in the training command. The original composition of the unit was 12 instructors from various other units in the command.

The first aircraft were received in the middle of December. All instructors received their initial check-out and began the evaluation program. Progress has surpassed most expectations as to the practicability of use by student naval aviators. Up to the end of March, three students had completed a check-out program and use of the F11F now appears better than ever.

Following another group of tests, final evaluation will be made and a definite syllabus will be established. The proposed syllabus includes transition to "high-performance afterburner-aircraft" and an introduction to tactics and weapons, including air-to-air missiles.

Creation of the program will decrease transition from training command to Fleet-type aircraft and, in the long run, make a definite increase in the quality of future naval aviators.

NAAS Chase Field

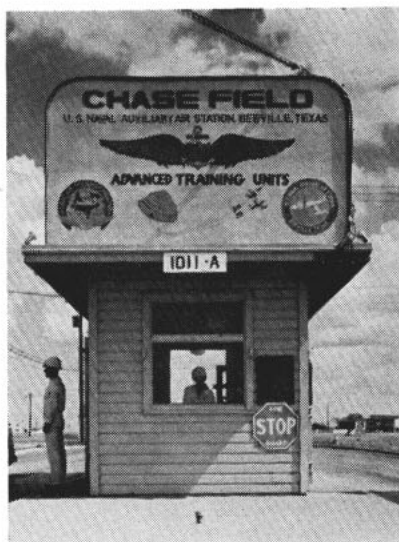
The Navy's first all-jet training base is located at the Naval Auxiliary Air Station Chase Field, Beeville, Tex. Here's the order of the day for flight training:

Study it, practice it, use it.

The advanced flight student checking in for his final phase of training at Chase Field wants and gets action. He doesn't however, jump into the cockpit of a swept-wing *Cougar* without first getting a lot of preparation.

Before he has earned his wings, he will have successfully completed 160 hours of academic training at Chase. The subjects cover F9F-8 engineering, principles of flight, survival, flight physiology, instrument navigation, operational navigation, aerology, flight rules and regulations, gunnery, communications, electronics, warfare orientation, aviation safety and aero-medical review.

He puts in three hours in emergency procedures trainers and logs 21 hours in the jet link trainer. He will have flown a minimum of 120 hours in the F9F-8, been briefed—and debriefed—an average of 180 hours. (In debriefing, the student reports back on what conditions he found and how they differed from his briefing.) Then he will be carrier qualified in the swept-wing aircraft with five or more carrier landings.



Turning out more than one student a day in a year's time, the base's two Advanced Training Units—203 and 213—each have a staff of 65 flying officers and 385 enlisted men. For half the year (the summer half in southern Texas), the units operate on a wing system, launching five times a day (four daytime launches and one at night). During the winter, shorter days and less favorable weather cuts the schedule down to three day launches and one night.

INCOMING STUDENTS report aboard the Beeville station at various times during the week. At first, they might think they are not doing much—that is, until the next Monday rolls around. From then on, it's a fast life geared to the jet age action sought by up-and-coming young aviators.

On that first Monday after he arrives at Chase Field, the flight student checks into his assigned train-

ing unit—either ATU-203 or 213—then heads for academic training, where for two full weeks he will do battle with such principles of flight training as F9F-8 engineering, survival, and Flight Rules Regulations.

For the next eight and a half weeks he will split his day between the books of academic training and actual flying. It is during this phase that the old "study it, practice it and use it" really stands out. A student will study a certain phase of flying, undergo classroom instruction on the subject, then practice the phase in the link trainers. Finally, he will fly an actual hop putting to use what he has just learned—sometimes all in the same day.

Reporting to the Chase Field flight line with approximately 180 hours from basic training, 30 of which are in jets, the advanced student flies seven hops with instructors and 11 solo hops in his first phase of advanced training. Each hop is about an hour and a half long and is flown at altitudes from 10,000 to 35,000 feet.

The student then progresses through formation flying, basic instrument flying, advanced instruments, low altitude flying, gunnery, bombing, tactics and carrier qualification. Highlights of flying at Chase are the first solo in the swept-wing *Cougar*, breaking the sound barrier, cross-country flights, carrier landings and, of course, winning those wings of gold.

BACKING UP the training units are the station's departments of administration, aircraft maintenance, dental, medical, operations, public works, security and supply.

Since the base was reactivated in June 1953, these departments have groomed and shaped the Beeville station from a 1943-vintage temporary construction type base to a forward looking, well kept base. Two new air-conditioned barracks, two new hangars, a new operations building, a new public works building, three new clubs, and a new theatre stand as fresh reminders of the base's spirit of progress.

Living at Corpus Christi

Some 225 Capehart houses for naval personnel are in various stages of construction. The three- and four-bedroom units, when complete, will house Navy families in air-conditioned comfort. Of these units, 17 are located on the base. The re-



mainder are located in the Chase Park addition of Beeville, just five minutes away from the main gate.

Chase Park is contained in an area of slightly more than 63 acres with the homes strategically placed along eight curving drives. There are no dead ends, and access to the area is gained through four streets, entering from three sides of the development. All are so placed as to eliminate major traffic problems at peak hours.

Unlike a great many housing developments, where the buildings resemble a planted corn field, with row after row of identical houses, Chase Park is highlighted with curved drives (longest straight stretch is less than 400 yards), 14 different sets of building plans and five circular terrace drives.

Picture windows, brick veneer construction, central heating and air conditioning, utility rooms, enclosed garages and direct connection to a central television antenna are features of the new homes along with the latest in kitchen equipment and built-in cabinets.

Though reactivated only six years ago, the base and its personnel have from the beginning been made to feel like "homefolks" in Bee County. They took an active part in celebrating the County's 100th birthday last fall and Chase Field families can be found busy in most of Beeville's civic clubs, PTAs, churches and scouting activities. Reflecting this community relationship is the F9F-2 *Panther* jet which stands on the Bee County Courthouse lawn in Beeville. The jet, given to Bee County in 1958 upon the request of county commissioners, stands as "a monument to the Navy in Bee County."

Besides this friendly relationship, Bee County offers Chase Field personnel a variety of recreation. Located on the upper coastal plain of south Texas, 60 miles northwest of Corpus Christi, 95 miles southeast of San Antonio, 140 miles northeast of Laredo on the Mexico border and 180 miles southwest of Houston, the county is surrounded by big city entertainment.

Inside its own 842 square miles Bee County offers a wide variety of hunting opportunities with such game as dove, quail, deer, javelina, coyotes, rabbits, and bobcats.

Salt and fresh water fisherman and duck hunters need travel only 35 miles from the Beeville base to Lake Corpus Christi, 60 miles to the Gulf



JET STUDENT aviators receive all phases of training in swept-wing jet aircraft.

of Mexico or 72 miles to the base's own recreation area at Seadrift, Texas on Nueces Bay. A new addition to the Chase Field Special Service offerings, Seadrift offers hunting, fishing, boating and overnight accommodations at a minimum cost.

On the base, Special Services maintains hobby shops for wood-

working, ceramics, leather working, auto repair and electronics. An Olympic size swimming pool, bowling alley, tennis courts and fully equipped gymnasium round out the base's recreation program — a program designed to go hand in hand with Chase Field's busy "study it, practice it, fly it" way of work.

PROUD MOMENT—Student receives wings of gold making him naval aviator.





ALOFT AT LAST, pilots soar over ship.

BEHIND THE SCENES of a take-off a pilot must go through a regular routine which visitors seldom see. Below: LTJG D. R. McKee checks his flying gear.



Routine

THE UNINITIATED OBSERVER in "Vultures' Row" on an aircraft carrier may have the idea that flying is mostly a matter of getting into a plane, roaring off on some exciting mission, returning to the carrier and getting out of the plane. However, before and after every flight a Navy jet fighter pilot goes through a regular routine which the visitor seldom sees.

For a glimpse at this behind-the-scenes activity, here are some of the steps the naval aviator goes through in connection with a typical mission. The aviator in this case is LTJG Donald R. McKee, USN, flying from USS *Midway* (CVA 41) with Fighter Squadron 211. His plane is an F8U-1 *Crusader*, a complex multi purpose machine.

Usually, the first thing he does is check and don his flight gear. This includes a protective helmet with oxygen mask attached, a flight jacket, a knee board on which he jots down information, a knife, a .38-caliber pistol and a "G-suit" to protect him from pressure changes at high altitudes. His lifejacket and parachute, which are attached later, remain in the plane.

In the VF-211 ready room, McKee and the other pilots on the mission are given the all-important briefing.

ALL HANDS



TEAMWORK—Pilot checks over F8U-1 Crusader with Plane Captain, N. D. Stone, AD3, USN before take-off.

Before Flight

He makes notes on his mission, weather conditions aloft, communications and navigation data, the location of the nearest land and airfield and all the other bits of information he will need during his sortie. He also swaps notes with his fellow aviators.

On the hangar deck McKee makes a check of his aircraft with plane captain Neil D. Stone, AD3, USN. (An aviator doesn't always fly the same plane, but the plane captain always services the same craft so that he will be completely familiar with it.) After that the jet is loaded on the carrier's forward elevator and raised to the flight deck.

The point at which McKee boards his plane depends on a variety of factors, among them the number of planes being launched and the place on the hangar deck where the plane is spotted. In this particular case, he is in the plane and ready by the time his *Crusader* gets to the flight deck.

There, the *Crusader* is positioned on the 240-foot catapult, McKee signals a "go ahead" and the heavy "Cru-bird" is hurled off the deck at a speed of 160 miles per hour by 300 pounds of steam pressure. During these vital split seconds a loss of power would mean an uncere- monious dunking and a rescue task

for the "angel"—the air group's helicopter hovering nearby.

The plane climbs quickly to 40,000 feet and is soon out of sight.

Time passes, and the planes come back. They circle the "bird farm," awaiting their turns to land.

About five miles from the carrier, McKee "dirties up" his plane (lowers landing gear, flaps and tail hook), and when he gets within range the Landing Safety Officer, LTJG Ray Hubbard, USN, reports "all down."

As McKee approaches, he descends to the 500-foot altitude used in the mirror landing system, and before long he spots the "meatball" of light in the big mirror on the carrier's deck which gives him a visual glide path to follow. If the meatball is too low, he knows he must increase altitude. If it's too high, he knows his plane is above the ideal four-degree glide path.

The jet's approach speed is 145 miles per hour. McKee has the meatball centered, and his tail hook snags arresting cable No. 3 perfectly.

After the plane has slammed to a halt and the hook has been disengaged, McKee taxis his aircraft from the landing area to be spotted on the flight deck. Then a debriefing, on to a hot shower—and maybe a relaxing game of acey-deucey.



FLYER, after flight, reports on plane's operation and his sortie. Below: Mission info is checked on briefing board.





'CAT SHOT'

You press your head back hard against the pad as the whine of the jet engine roars into your ears.

The catapult officer drops to one knee and gives the "Fire" signal—and then it hits you.

Your breath is sucked out as the catwalks streak by in a grey blur. The sling propels you off the deck.

You bank the jet fighter away from the carrier dropping far behind in the turbulent jet-wash.

That, in a few words, is what it is like to be catapulted from a carrier deck in a jet. The "cat shot" from a dead stop to a speed of 150 mph in less than 200 feet is a thrill experienced only by carrier pilots.

NOW YOUR JET fighter is waiting aboard the attack aircraft carrier USS Randolph (CVA-15).

The swept-wing plane is spotted on the port side of the flight deck, aft of Number Two elevator. The engine is running, preliminary items on the check list are OK, and you have been securely strapped in by

Demo Pilots Ready Men of BTG-5 for First Landings

Today's Navy is built around a fast striking force, the nucleus of which is the aircraft carrier. The carrier can launch aircraft almost anywhere and then retire somewhere over the horizon to await their return.

The pilots of these planes have learned their job well. One vital part of their job—landing aboard the parent carrier—was probably learned at NAAS Saufley Field.

Carrier qualification (CQ) training is the mission of Saufley's Basic Training Group Five. Seventy-five T-28 "tail-hook" aircraft are used for the training. All instruction in this phase of basic flight training is conducted either at Saufley, at nearby Bronson Field, or aboard the aircraft carrier USS Antietam (CVS 36).

To acquire the skill necessary to make a good carrier landing is not easy. Many tedious hours of practice on the field are essential to establish correct procedures.

Students in BTG-5 learn from two different "breeds" of instructors. One is a "demo" or demonstration pilot who teaches the student to fly his aircraft at low air speeds

and to make the proper approach to the landing strip. The other instructor stays on the ground and schools the student on his approaches and landings. This man, the LSO (landing signal officer), communicates with the student by signaling with paddles.

CQ training consists of 14 flights. On his first hop, the BTG-5 student finds the Demo pilot in the rear seat of the T-28 instructing him on slow-flight characteristics of the aircraft. On the second flight, he flies solo and further familiarizes himself with slow-flight procedures. The third time out, the Demo instructs him on landing at slow speeds.

The next 10 hops are devoted to Field Carrier Landing Practice. Before the student can ever hope to whip a CQ landing, however, he must first master the LSO's hand signals. The eight basic signals are repeated over and over until the student recognizes a signal faster than he would his own name. He must instantly be able to distinguish between a "cut" and a "wave-off" and must be prompt to recognize the "too slow" signal.

Most CQ flying is below 200 feet and at speeds near a stall. The low altitudes and slow air speeds are necessary to simulate conditions for a carrier landing.

The bus with BTG-5 students aboard arrives at Bronson Field about 0630. After instructor's briefing, the students are aloft for either dual or solo instruction.

If dual instruction is scheduled, the Demo pilot usually makes the first two touch-and-go landings. Then he assists the student on the next two. On another four, the student probably executes the maneuver himself.

If solo flying is the order of the day, five students are briefed by their LSO instructor. They then go to their planes and take off. The LSO takes his position at the end of the runway. He waves them one by one through their touch-and-goes. During the 10 solo FCLP hops, the average student makes 70 landings and takes countless wave-offs from the LSO instructor.

Most flying for BTG-5 students is done in the early morning or late afternoon. Turbulent winds near the ground during the hot

the plane captain. The folded wings flutter slightly as the jury struts are removed and the wind tests their strength.

The plane captain removes the tie-downs as you push down hard with your toes to hold both brakes until the yellow-shirted plane director gives the signal to taxi forward. Release the brakes, add power with the throttle and your plane begins to advance. Pressure on the left brake eases the nose to port.

Out in front the director signals "spread wings." You reach down and throw the lever to the "spread" position, lock the wings, move the flap lever to the down position and go over the take-off check list.

The wind has picked up and is whistling across the deck at 35 knots. More power is required to taxi up the deck in single file with other jets from your squadron as the carrier heels over and begins turning into the wind.

You are at the "Y"—the center of the flight deck where the jets split their single file in two, roaring over to the starboard and port catapults.

Aboard Carrier

middle of the day makes flying at 78-80 knots dangerous.

After BTG-5 students have proved themselves able to make a perfect simulated landing at Bronson, they are ready for the carrier. The LSO takes the lead T-28. His five students follow in their planes. When they arrive over *Antietam* in the Gulf of Mexico, the LSO leads his flight through two touch-and-goes. Then he takes them in for six arrested landings.

The T-28s come in low and slow, just 15 feet above the deck at 78 knots. When the signal is given by the LSO on the carrier, the student cuts his engine and the four-ton aircraft drops to the deck. The low-hanging tail hook catches the arresting wire stretched across the flight deck and the plane is brought to a halt. The student is qualified when six satisfactory arrested landings have been made on the carrier.

BTG-5 currently has a student input of 30-35 students per week. It has 22 LSO instructors and eight Demo pilots. These men do a job unique in aviation. No other U.S. military service duplicates it.

—Bill Manlove, JO2, USN



OFF WE GO—Steam catapult blasts pilot and plane skyward with a mighty roar as an F8U-1 Crusader takes to the air on a morning mission at sea.

The director motions you to "Leap-ing Lena," the port cat.

Hold the right brake and pivot around to line up with the catapult.

Position is good—the director motions you ahead slowly and you inch forward until you are jerked to a stop by the taut hold-back line.

The yellow shirt signals "off brakes" and your heels drop to the cockpit floor clear of the brake pedals. You move the stick back and forth in a last-minute check of flight controls. As you glance over your shoulder the ailerons and elevators waggle back obediently.

Yellow shirt passes the lead to the catapult officer who gives the two-finger turnup signal. Push the throttle forward and clamp your hand around the catapult grip to prevent the throttle from slipping back during the launch. The engine winds up and stabilizes at full power and its screaming roar rushes through your crash helmet. A quick glance at the instruments (oil pressure and tail pipe temperature OK) and you are ready to go.

You salute the catapult officer—your signal that all is set. Rest your right elbow in your lap, keep it poised with stick neutral until after the acceleration period. . . . the plane is trimmed for level flight at take-off speed. A few swift seconds after you salute, the cat officer drops to one knee and points his arm toward the bow of the ship. That is the FIRE signal.

Within a second or so the power of the catapult hits you, causing the

plane to shudder and pushing your head farther back into the headrest

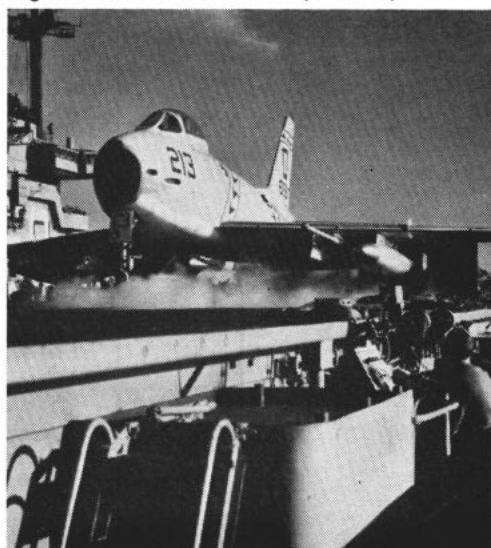
The plane hurtles forward as the sling propels you along the track and then the wheels clear the forward deck edge. Grasp the control stick and take her away.

Reach with your left hand and flick the landing gear lever and watch the wheel position indicators point "up." Ease the stick to the left and the plane banks into a climbing turn away from the carrier's bow.

That was your cat shot—over in seconds but a thrill you'll never forget.

—Lt. John E. Drait, USN
As told to Charles Wright.

ALL STEAMED UP—Steam rises as a *Fury* gets set for a 'cat shot' from flight deck of USS *Forrestal* (CVA 59).



AIR CONTROLMAN

"Moffett Tower—This is Papa Alfa too ze-ro thuh-ree, initial for landing. Over!"

"Papa Alfa too ze-ro thuh-ree, call over break for course thuh-ree too, Moffett altimeter thuh-ree ze-ro point too ze-ro. Over!"

"Moffett Tower—Papa Alfa too ze-ro thuh-ree, Roger, out."

"Moffett Tower—Papa Alfa too ze-ro thuh-ree at the break, over."

"Papa Alfa too ze-ro thuh-ree cleared to break. Call turning base, over."

"Moffett Tower—Papa Alfa too ze-ro thuh-ree at turning base. Gear is green, over."

"Papa Alfa too ze-ro thuh-ree cleared to land. Out!"

THIS STRANGE LINGO is not between two mixed-up bee-bops transmitting on the wrong frequency—it's the common everyday spoken language of the flying Navy. The conversation quoted above was between the pilot of a P2V coming in for a landing and the enlisted control tower operator at NAS Moffet Field, Calif. It could be any air station.

During normal flight operations, landings and take-offs are the most critical moments. Seldom does the pilot accomplish these tasks by himself. It is not enough for him to know how to operate his controls—he must also know that the field and its approaches are clear of other planes.

And the people whom a Navy pilot must depend upon for this vital information are the enlisted control tower operators. They are the highly trained men and women of the Air Controlman rating. There are about 3700 ACs in the Navy today—about 800 of them strikers and 50 Waves.

You'll find ACs directing air traffic from the control tower at Moffet Field, or for that matter at any of the Navy's other air stations, auxiliary air stations, air facilities, seadromes, or aboard aircraft carriers at sea, and as aircrewmembers flying with Airborne Early Warning (AEW) squadrons.

As with a number of other ratings, the AC rating is also divided into service ratings which stress speciali-

zation in the lower pay grades. These service ratings—limited to strikers and rated men in pay grades E-4 and E-5—include ACW (air controlman, airborne CIC operator), ACT (air controlman, tower), and ACR (air controlman, radar).

The Navy has about 900 ACWs on active duty. They are generally assigned to aircrewmembers billets with AEW squadrons where they perform duties involving the control of aircraft in flight and other duties in connection with airborne CIC. In addition to these ACWs, a proportionate number of AC1s and ACCs are also assigned to these airborne CIC billets.

RESPONSIBLE for the operation of the Navy's many control towers are some 1000 ACTs and a number of supervisory AC1s and ACCs. When not based ashore, ACTs are normally assigned to sea duty aboard aircraft carriers. Practically all of the active carriers have an allowance for air controlmen. Most of them have one ACT2 and two ACT3s aboard, and four other ACs (an ACC, AC1, ACR2 and ACR3) assigned to its Carrier Control Approach (CCA) team.

The ACs and ACRs assigned to CCA teams perform the same functions aboard an aircraft carrier as a Ground Controlled Approach (GCA) team would ashore. The carrier-based ACTs usually work in flight control or serve as talkers—transmitting oral instructions over the loud speaker or voice radio—for the air officer or landing signal officer.

The Chief of Naval Personnel controls both the sea and shore assignments for the 200 ACRs and the chief and first class ACs serving with CCA, RATCC (Radar Air Traffic Control Center), GCA, and ASR (Air Surveillance Radar) teams.

All other personnel in both the general and service AC ratings are rotated under normal Seavey/Shorvey procedures. On the average, all ACs serve about two years at sea and three years ashore. For the ACs serving in overseas billets, the length of duty tours depend upon their dependency status and areas assigned.

Since there are no established shore duty billets for ACWs—the CIC operators—they are usually as-

AIR CONTROLMAN passes instructions to pilot from tower at Ellyson Field.



ALL HANDS

signed to special cross-training at the Class "A" Air Controlman Tower School at Olathe, Kans., upon completion of a tour of sea duty. When this schooling is completed the ACWs are then assigned to an authorized air controlman billet for a normal tour of shore duty.

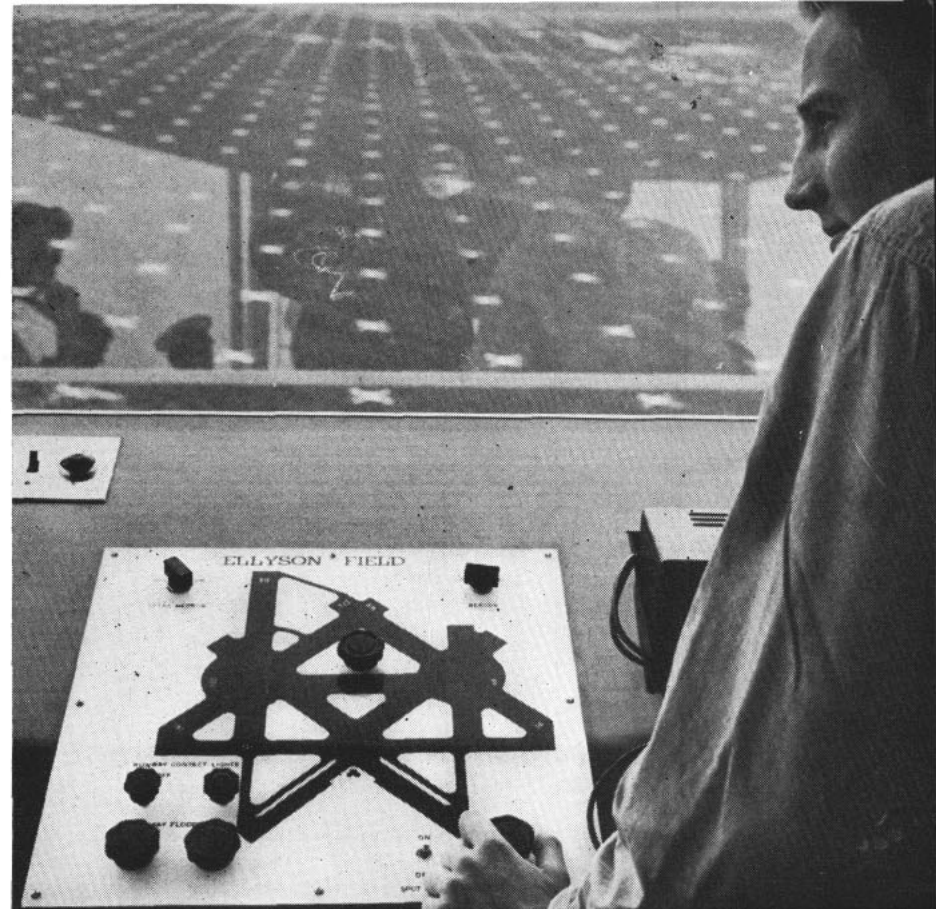
THE GENERAL RATING ACs (pay grades E-6 through E-9) have to be qualified in the over-all aspects of the air controlman rating. To meet this requirement a number of ACLs and ACCs are being assigned (if eligible) to schools for additional training. They normally receive this instruction when in the process of being transferred upon completion of a normal tour of sea or shore duty.

In general, air controlmen learn the duties of their rating through on-the-job training or at one of the AC schools. The basic Class "A" Air Controlman Tower School is located at NATECHTRAU, NAS Olathe, Kans. In order to attend this 10-week school you must meet the physical requirements for an AC as set forth in the *Manual of the Medical Department* (BuMed Manual); have a clear speaking voice, normal color perception, a combined GCT and ARI score of 110 and have 24 months of obligated service.

The Class "A" Air Controlman W (airborne CIC operator) School is located at NAS Glynco, Brunswick, Ga. In order to attend this 12-week course, candidates must have a combined GCT-ARI score of 110. They must possess the physical requirements as set forth in the BuMed Manual for Combat Aircrewman candidates (Airborne Intercept Operator, Radar) and be motivated toward duty involving flying. ACW "A" school candidates must have no speech impediments, normal color perception, have a confidential clearance and 24 months' obligated service.

In addition to these two Class "A" schools, the Navy also maintains a 12-week Class "B" Air Controlman School at Olathe. This school is designed to provide the AC service rating personnel in pay grade E-5, and general ratings ACLs and above, with the theoretical, practical and comprehensive knowledge necessary to perform the more responsible and over-all duties of the general AC rating.

Entrance requirements for the AC "B" school call for trainees to



TOWER MAN—ACs operate traffic control lights when directing air traffic.

be either general or service ACs in pay grade E-5 or above, and have 18 months of obligated service.

Waves are eligible to attend both the ACT "A" and the AC "B" schools.

ACs in pay grade E-4 or above with six months' control tower experience are also eligible to attend the six-week Ground Controlled Approach Course. This school, which also trains ETs and ENs for GCA duties, is located at NAS Olathe.

LET'S LOOK a bit more closely into the over-all duties and responsibilities of the general rating air controlman:

When assigned to a control tower and actually engaged in directing air traffic, the enlisted air controlmen are responsible for the safe, orderly and expeditious movement of all aircraft within the vicinity of their seadrome or air station. As you can plainly see, this is a very demanding assignment and one that must be done with perfection.

It is the air controlman who tells pilots when to take off or land, and controls the movement of all ground traffic. In so doing, it is his job to prevent collisions in the air and in the landing and take-off areas. He also assists pilots by providing such

advice and information as may be useful for the safe and efficient conduct of their flights.

And if the need arises, it is the air controlman who—in an emergency—flashes an immediate warning to planes in flight. He also notifies appropriate organizations regarding aircraft known to be, or believed to be, in need of search and rescue aid, and assists them as required.

In order to do all this, air controlmen must have a commanding knowledge of radio, radar, flashing light signals, flag hoists, aerology, navigation; and, of course, the necessary flight clerical work and the contents of countless publications. His base of operations usually is in the traffic control tower, the air operations office or in flight control aboard an aircraft carrier.

IN THE CONTROL TOWER, as mentioned earlier, the AC is responsible for the issuance of clearances and information to pilots of aircraft. Foremost among the reasons for instructions and information from the tower is that of preventing collisions between aircraft in the traffic pattern, planes landing and taking off at the landing area, aircraft and vehicles operating on the landing area.



OVER LAND—F8U-1 jet *Crusader* circles NAS Moffett Field, Calif., as pilot prepares to land. All pilots receive landing clearance from control tower.

Another responsibility of the control tower is that of issuing and relaying information and clearances. Such instructions are essential for the prevention of unnecessary delays to aircraft using a landing area, and also to permit aircraft to use the landing area properly.

In clear weather, which in aeronautical lingo is called "VFR" (for Visual Flight Rule) weather conditions, the pilot is more or less on his own when it comes to avoiding collisions with other aircraft. During VFR, information and clearances from the air controlman are intended merely to aid pilots.

When it comes to flying in bad weather or "IFR" (Instrument Flight

Rule) weather conditions, the pilot is utterly dependent on the tower for information as to the whereabouts of other aircraft. Therefore, it is of utmost importance that all clearances issued by the air controlman to pilots be concise, definite and complete. In other words, the AC must know what he's doing and he must do it right the first time. There's never any margin for error.

THE MOST IMPORTANT single factor affecting the flow of air traffic is weather. Thus, in order to discharge his daily duties, the air controlman must know aerology—the science of weather. He is required to know how to operate various instruments to "measure weather," as well as

master the codes and symbols used in weather reports. All this is essential for flight planning since the AC must give particular attention to winds aloft, surface winds, icing conditions, rough air, fog, air pressure and temperature. He must be able to weigh and interpret all of this information in order to pass accurate weather data to the pilots.

And the methods used in passing weather information to pilots lead into communication procedures—one of the most vital functions of the many which air controlmen perform. They must know both visual and oral communications. This takes in semaphore, flags, pennants, flag-hoists, flashing lights such as beacon signals and portable traffic light signals; warning and acknowledgment signals, radio and telephone (land-lines), radiotelephone transmissions, local and longline interphone systems, teletype, relaying of message, guarding frequencies and equipment checks.

When it comes to using all these different types of communications procedures it is essential for the air controlman to use the proper phraseology. In addition to knowing the accepted terms which are marked for their simplicity and clarity, the AC must be able to speak without accent or impediment of speech. You can imagine the results of a stammering voice attempting to direct airport traffic in an emergency when clear and precise speech is required.

NOT ONLY MUST the AC be able to speak properly and clearly, but he must also be able to see and hear without any difficulty. The observance of "everything that takes place within sight or hearing" is one of the General Orders—and is also at the top of the air controlman's "must" list. The AC, as a practical part of his work, must be able to recognize all types of aircraft. For the AC, however, recognition is not limited to the mere identification of the plane sighted. He is required to know at a glance the type of plane, its manufacturer, popular name and performance characteristics.

In order the better to understand the problems and situations of pilots of aircraft, the air controlman must know the principles of basic air navigation. Chart reading, plotting sheets, projections, dead reckoning, wind vector diagrams, computers, and the basic principles of instrument flying are some of the everyday tools of

FLASHY—Air controlman (right) flashes message to pilot. Left: Grid checked.



navigation which the AC must use.

The intricacies of radio navigation are no mystery to the AC as his routine duties call for the use of the four-course range, "H" facility, fan-marker, VOR, DME, ADF, ILS, air surveillance radar, VHF, direction finder and loran.

Most of these terms may be vague to you, but to an experienced air controlman they are used regularly as part of their everyday vocabulary. More important than just talking about these facilities, the practical aspects of them is what the AC depends upon so he can direct airport traffic, issue flight plane, and correlate necessary information for aviation activities which he serves.

Air controlmen are required to read charts prepared from aerial photographs, realign a range leg, make airspeed and altitude conversions, plot positions, establish courses and distances, work practical and theoretical navigation problems, solve for estimated time en route and the required ground speeds.

WHEN HANDLING airport traffic, ACs frequently get requests from pilots for a ground control approach (GCA). When such a request is received the air controlman must alert the GCA unit and give information and instructions, especially those pertinent to traffic during the final approach. Since the AC is often called upon to assist in a GCA, he is required to know the types and uses of radio equipment, frequency coverage, unit and channel selection, standard phraseology, the main components of search radar, precision radar, and approach controller positions and duties.

GCA is but one of the many duties



OVER SEA—Pilots of carrier-based planes depend on air controlman to pass the word for landing. Here, A4Ds of VA 34 fly over USS Saratoga (CVA 60).

the AC may be required to perform. In the control tower, the duty air controlman is usually the traffic control operator. Among his other duties will be the operation of the field lighting system; operation of the directed traffic control light; operation of remote control equipment to prevent failure of aids to navigation; obtaining, adjusting and relaying altimeter settings; keeping of operational and material logs; processing airway clearance forms; and submitting accident and other reports.

When not working in a control tower, the AC is usually assigned to an air operations office.

All rated air controlmen—with the exception of ACWs and those serv-

ing aboard ship and at certain overseas stations where it is impracticable to be examined—are required to possess a Federal Aviation Agency Air Traffic Control Tower Operator Certificate.

This means that in order to get rated they must, in addition to passing their regular Navy advancement exams, pass a written examination given by the Federal Aviation Agency. This civilian exam certifies that they understand air traffic rules, airport traffic control, air navigation and procedures and weather observation.

So you see, an air controlman must really know his business.

—H. George Baker, JOC, USN.

HOLD THE PHONE—Highly trained men and women of the AC rating supply pilots with vital flight information.





ALL CLEAR

Initiated by pilot. Touch tip of index finger with tip of thumb. Taxi signalman responds with similar gesture if all is clear.



START ENGINES

Pilot extends number of fingers to indicate engine desired. Signalman responds with similar gesture while rotating other hand in clockwise motion (if all clear).



* REMOVE AUXILIARY POWER PLUG

Initiated by pilot. Extended thumb of right hand touches palm of left hand, then moves suddenly away from palm. Signalman responds with similar gesture.



* REMOVE LANDING GEAR PINS (Safety Locks)

Initiated by pilot. Fingers of left hand rest on thumb to form ring, right forefinger placed in ring and suddenly withdrawn. Signalman responds with similar gesture.



PULL

Pilot makes pulling motion of the extended outer hand sweep hip level with extended hand.



SLOW DOWN

Hands at waist level, palms down, execute downward patting motion.



STOP

Hands upraised to eye level, elbows flexed and palms toward aircraft as in a policeman's stop.



EMERGENCY STOP

Execute "Stop" signal except use fists.

SIGNAL LA NAVAL A

These standard aircraft taxi signals were derived from material supplied by the Office of the Chief of Naval Air Operations.

SIGNALS MARKED WITH *



FOLD WINGS

Arms straight out at sides then swept forward and hugged around shoulders.



SPREAD WINGS

Arms hugged around shoulders then swept straight out to sides.



LOWER WING FLAPS

Hands in front, palms together horizontally, then opened from wrists in alligator-mouth fashion.



RAISE WING FLAPS

Hands in front horizontally with palms open from wrists then suddenly closed.



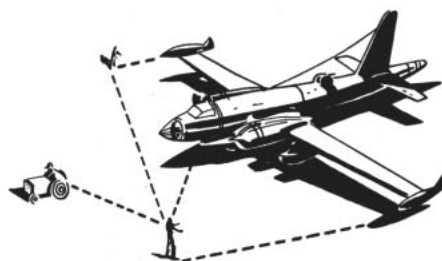
OPEN COWL FLAPS

Hands flat against sides of head, then "opened" by bringing thumbs outward and forward.



* INSTALL LANDING GEAR PINS (Safety Locks)

Initiated by pilot. Fingers of left hand rest on thumb to form ring, right forefinger suddenly inserted into ring. Signalman responds with similar gesture.



Towing

To direct the towing of an aircraft, the taxi signalman will assume the same position as prescribed above, keeping the eyes of the pilot and the driver of the towing vehicle visible at all times.

When necessary, an additional crewman will be stationed at the right wing tip. This crewman at all times will remain visible to the taxi signalman to whom he will direct all necessary signals.



Night

At night the signalman uses two light wands. He would use identical day signals except that the signal will be made with wands before the signalman.

CHOCKS

Sweeping motions with thumb outward. Signalists stand apart with thumbs extended.

LANGUAGE IN AVIATION

Adapted for use in *ALL HANDS Magazine*
Aviation Training Division in the
Department of Naval Operations.

ARE NOT MADE WITH WANDS.

THE TAXI SIGNALMAN

The taxi signalman will indicate his readiness to assume guidance of the aircraft by extending both arms at full length above his head, palms facing each other.

COME AHEAD

Hands at eye level, palms toward face. Execute beckoning motion; rapidity of hand motions indicates speed desired of aircraft.

RIGHT TURN

Execute "Come Ahead" signal with right hand while pointing with left hand to the wheel which is to be braked.

LEFT TURN

Execute "Come Ahead" signal with left hand while pointing with right hand to the wheel which is to be braked.



EMERGENCY STOP

Night Operations

"Stop" signal will be made by crossing lighted wands before the face of the taxi signalman.

OPEN SPEED BRAKES

Right hand in front, fingers together, thumb against middle finger, then open the hand suddenly.

CLOSE SPEED BRAKES

Right hand in front, palm cupped with thumb down, tip of thumb and middle finger suddenly brought together.

UNLOCK TAIL WHEEL

Hands together overhead, palms together then opened from the wrists to form a vertical V.

LOCK TAIL WHEEL

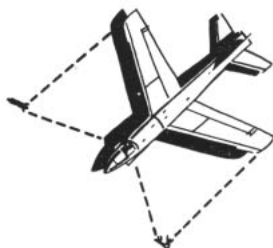
Hands together overhead, palms open from the wrist in a vertical V, then suddenly closed.

TURNOVER OF COMMAND

Both hands pointed at next succeeding taxi signalman, one hand extended and the other at chest.

UP HOOK

Right fist, thumb extended upward, raised suddenly to meet horizontal palm of left hand.



Position of Taxi Signalmen

The taxi signalman, when directing the movement of aircraft, at all times will assume and maintain a position from which the eyes of the pilot are visible. The position will

be on a line extending directly forward from the left wing tip, except when the assumption of this position is rendered inadvisable by special conditions such as might occur aboard a carrier.



Helicopter
Stand outside the
rotor diameter.

INSERT CHOCKS

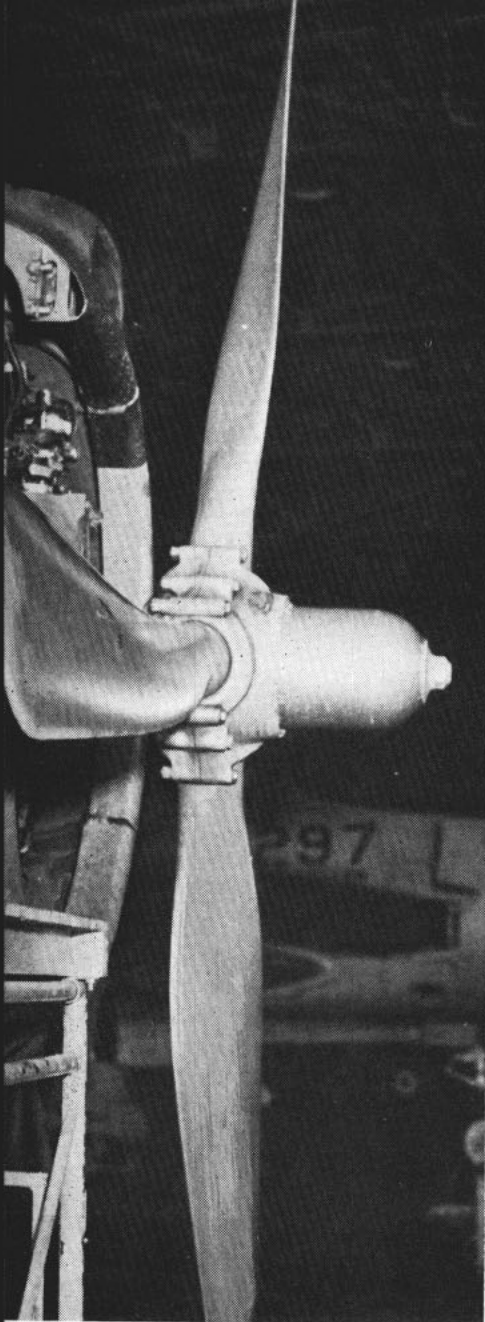
Sweeps fists together at hip level with thumbs extended and pointing inward.

CUT ENGINES

Hand drawn across neck in "throat cutting" motion.

Operations

The signalman will stand exactly as shown, giving the taxi signals except the "Emergency Stop" made by crossing the face of the taxi signalman as noted above.



TEAMWORK—Prop-driven AJ re-gases fuel-consuming jet while in flight.

Prop Planes Keep Busy

In this age of jet aviation and guided missiles, men's major interests appear to lie in the conquest of space and in speed. But does this make the propeller plane and its pilot obsolete? PACFLT doesn't think so.

In a well knit and logical presentation (we wish we knew who wrote it so we could give proper credit), a ComNavAirPac expert puts forth the argument that neither the jet nor the missile can take the place of the propeller plane in many situations which involve low-altitude flight endurance and small-area operations.

THREE PROPELLER PLANES in Navy use today are used to prop the argument: The S2F Tracker, a carrier-based, two-engine plane designed exclusively for ASW operations from carriers; the P5M Marlin, a seaplane used for long-range antisubmarine warfare and patrol, with a secondary mission as a mine layer; and the AD Skyraider, a low-level attack aircraft.

In antisubmarine warfare a plane with speed is desirable though not essential, but the plane does need the ability to remain airborne within any given area for long periods.

Once the target area is chosen,

the basic requirements in ASW are to find the sub, pin him down and destroy him. The Tracker and the Marlin are both capable of serving this need; however, each is designed to operate in its own fashion. In some cases they complement each other; in others, they work alone.

THE s2f Tracker, designed to fly at slow speeds and low altitude, is the Navy's carrier-borne antisubmarine aircraft. Although small enough to be carried aboard an aircraft carrier, the Tracker is large enough to carry a load of electronic equipment and the weapons needed to destroy even the most modern submarine.

Its crew searches for lurking submarines visually, through radar, by sonobuoys dropped into the sea to relay tracking information to the plane or by Magnetic Airborne Detection (MAD) gear.

Sensitive radar detects surfaced submarines, snorkeling subs or even periscopes.

MAD pinpoints the submarine by detecting disturbances the undersea craft makes in the magnetic field of the ocean floor.

Sonobuoys designed to hear the pulsing beat of a submarine's propellers are dropped singly or in patterns and immediately begin to transmit what they hear to radio receivers in the aircraft. The S2F's destructive power lies in its rockets, depth charges, or homing torpedoes.

Operating from sea or shore, the P5M Marlin is a part of the Navy's antisub team. Although resembling a duck out of water while on the ramp at the seaplane base, in its element the Marlin is an effective weapon. Because it is larger than the Tracker, the seaplane has triple the cruising range. In addition, the seaplane can be based wherever there is reasonably sheltered water. Coordinating its operations with seaplane tenders for repairs and refueling helps make it even more versatile. The P5M carries a normal crew

PROPS HELP planes like S2F Tracker and AD Skyraider perform their mission.





MARLIN'S props give greater range.



JET JOBS fly high and fast, but propeller planes do certain jobs better.

in Jet Age

of three pilots, a navigator and eight crewmen. Carrying much the same equipment as the S2F it, too, tracks the enemy sub with sonobuoys, magnetic detection gear or by radar until it is in position for the kill.

The *Skyraider* is a single-engine all-weather, carrier-based attack aircraft. Over 2000 various configurations of seven models have seen carrier service since 1948.

The biggest asset of the "Able Dog" (it dates back to the old phonetic alphabet) is its capability of carrying heavy loads over long distances, its payload sometimes weighing more than the plane itself. This, together with the low-altitude fuel economy not possible in jets, makes the *Skyraider* a valuable aircraft for air support of ground troops. Korea's rugged terrain and comparative brush-war type tactics proved to be a natural for the maneuverability and accuracy provided by the AD.

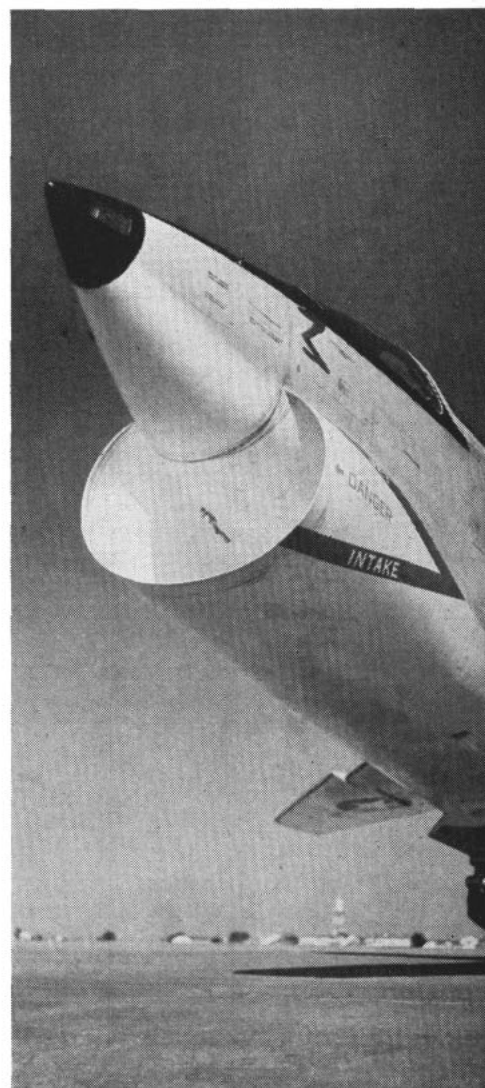
Since ADs are capable of carrying a heavy load, the Navy is now converting them into "buddy-system" refueling planes. This operation is designed to provide inflight refueling to jet aircraft. Usually a returning jet is necessarily low on fuel and if its floating airbase suddenly confuses the issue with a fouled flight deck the plane might have to be ditched. With the buddy system, the long winded AD, with its large payload capacity, is loaded with fuel, takes off from the carrier and circles overhead and if necessary this flying gas station can replenish the fuel tanks of the thirsty jets.

The inflight refueling system is also used to extend the combat range of jets. The fuel-laden AD is launched in advance of the jets, flies to its highest altitude to rendezvous with jet planes after their gas-gulping climb to their own particular element, the upper atmosphere. This operation increases the jet's range by many hundreds of miles.

OTHER MODELS of the *Skyraider* have traded armament for electronic and early warning radar. Using its great fuel tanks to obtain extra staying power, the plane then becomes a long-range sentinel to the Fleet. Because of the odd shape of the electronic gear, this type of AD is known as the "Guppy." Flying miles in advance of the Fleet, the AD is able to detect radar beams from enemy sources or, by its own radar, can warn the task force of approaching enemy planes or ships.

The *Skyraider* is also highly respected throughout the Fleet for its ability to carry atomic weapons. Because of its long-legged, low-altitude capabilities in carrying its weapons to enemy positions, the AD actually cruises below the average radar pickup range. Should an opposing jet interceptor spot one of these slower low-flying planes from above, the prop-driven aircraft still has an excellent chance to complete its mission. The jet, in coming down to the AD's own altitude and speed, would then be in the AD's element, giving the prop plane an equal chance for survival through its greater maneuverability, difference in air speed and its longer endurance at low altitude.

The planes mentioned above are only three among the Navy's propeller aircraft. They are representative of the many vital assignments no other plane can handle as effectively as the propeller plane.





THE HUNT—Air Reservists on Operation Skynet joined Fleet in ASW hunt. Rf: Reserve radar operator watches scope.

Operation Skynet

A RADAR OPERATOR, flying in a P2V-5F *Neptune*, detects a small, unidentified surface contact on his search radar.

The skipper of the patrol bomber alters his course to close the range and make all preparations for an attack. Simultaneously, the task group commander is notified of the contact. The *Neptune* rapidly closes to visual range, determines that the target is an enemy submarine running on the surface, and attacks.

The submarine dives. Contact is lost. Now the aircraft returns to its

attacking point and conducts a Magnetic Airborne Detector (MAD) investigation to regain contact. A pattern of sonar-equipped buoys is used to track the submerged submarine.

A helicopter arrives at the target location, lowers a sound head, and is coaxed onto the target by the tracking patrol plane. Destroyers arrive on the scene and are directed to the target by the whirlybird. The DDs begin a series of coordinated multi-ship attacks.

Before long the task group commander receives a report from the

attacking group: "Mission accomplished. A kill."

This is ASW.

And one more interesting point. The plane crew was made up entirely of Reservists, and the plane was assigned for Naval Air Reserve training.

A FEW WEEKS AGO, Naval Air Reserve ASW squadrons took part in the First Fleet's training exercise, *Operation Skynet*. The exercise included flight missions similar to the one described above.

During *Skynet*, Pacific forces—

NAVAL AIR RESERVE ASW squadrons showed plenty of know-how in tracking down and killing 'enemy' submarines.



including hunter-killer air and surface units—sought to prevent enemy penetration of a seaward barrier of more than 600 miles in depth. Navy submarines posed as enemy undersea forces attempting to break through the barrier.

Reservists from air stations at Oakland, Los Alamitos and Long Beach, Calif., Glenview, Ill., New Orleans, La., Minneapolis, Minn., and Seattle, Wash., joined forces for the exercise. Together, they maintained 24-hour patrols and flew around the clock in shifts of up to 13 hours' duration. When they weren't actually in the air, attempting to seek and destroy "enemy" submarines, the "Weekend Warriors" were on standby crew status or catching up on needed sleep. A detachment of Reserve mechanics and technicians supported the ASW aircraft.

The operation marked the first time that Air Reservists took part in full-scale peacetime Fleet maneuvers on equal footing with active duty sailors and aviators.

How did the Reservists fare? The message sent to the Chief of Naval Air Reserve Training by Commander Fleet Air Wing Fourteen is a good indication:

IN DEMANDING ALL WEATHER CONTINUOUS AIR OPERATIONS, I HAD MY RESERVATIONS ABOUT RESERVE CAPABILITY. THE WAY THOSE TIGERS TORE INTO THE PROBLEM, THEIR VERY REAL ENTHUSIASM, THE PROFESSIONALLY COMPETENT OPERATION OF THEIR COMPLEX ANTISUBMARINE WARFARE EQUIPMENT, AND THEIR WONDERFUL CREW TEAMWORK ARE LARGELY RESPONSIBLE FOR THE LION'S SHARE OF CREDIT FOR OUR VERY SUBSTANTIAL SUCCESS. PLEASE PASS TO PARTICIPATING RESERVE SQUADRONS AND STATIONS MY WELL DONE, THANKS, AND COME AGAIN.

In keeping with the Navy's gradual change in emphasis toward ASW, the Naval Air Reserve has undergone a considerable transition from fighter and attack squadrons to ASW squadrons—a transition which has been in process for several years. Some squadrons have been decommissioned, some have been redesignated, and a number of new squadrons have been commissioned.

LAST YEAR, the entire Naval Air Reserve program became part of the Selected Reserve. The Naval Air Reserve now consists of three Selected Reserve Components:

- ASW Component (Air), which



RESERVE CREWMEN work behind scenes to keep their planes on the prowl. Above: AO installs practice depth bomb. Below: Plane's wiring is checked.





HERE'S HOW—VS Crew 16 gets word on ASW mission. Rt: Reserve helicopter pilots compare notes on kill.

includes 58 VS (Carrier Antisubmarine) squadrons, 73 VP (Patrol) squadrons, 18 HS (Helicopter Antisubmarine) squadrons, and three ZP (Lighter Than Air) squadrons;

- Active Fleet Augmentation Component, which includes 22 Air Wing Staffs and 25 VF (Fighter) squadrons, 27 VA (Attack) squadrons, 70 VR (Fleet Tactical Support) squadrons, 12 HU (Helicopter Utility) squadrons, 20 CV FASRONS (Fleet Aircraft Service—Carrier) squadrons, 20 VP FASRONS (Fleet Aircraft Service—Patrol) squadrons, and 44 Air Intelligence Reserve Training Units (AIRTUS).

- Shore Establishment Component, which includes 30 Bureau of Aeronautics Training Units (BARTUS).

Members of the Selected Air Reserve have pre-cut mobilization orders, and are available—with the aircraft of the Naval Air Reserve

Training Command—to join the active Fleet immediately.

THE “WEEKEND WARRIORS” take part in regular drills in their assigned aircraft. Annual active duty for training (AcDuTra) is performed under the appropriate Fleet commanders.

Air Reserve ASW squadrons have been flying weekend antisubmarine barrier patrols for many months, gaining valuable experience by complementing the regular Fleet patrols.

Regular drills also include coordinated training exercises with Fleet and Reserve surface and submarine units. Although carried out on a much lesser scale than the far-flung *Skynet* maneuver, these exercises have the same goal—detection, location and destruction of “enemy” subs.

Not all training is conducted Stateside. Many Air Reserve VP and VR squadrons are deployed to the

Mediterranean, for example, for AcDuTra with the Sixth Fleet.

More than eight years have gone by since the first Naval Air Reservists to see air combat since World War II launched air strikes from USS *Boxer* (CVS 21) during the Korean conflict. At that time, upon relinquishing command of the Air Force, Pacific Fleet, VADM T. L. Sprague, USN, reported an interesting fact: “One-third of the Navy’s air offensive in Korea has been accomplished by Reserve squadrons; fighting units ordered to duty intact from their home stations. This . . . has clearly demonstrated that the Naval Air Reserve Program is the only effective and economical way to maintain a high standard of preparedness.”

Judging from the results of current training programs, our “Weekend Warriors” of today are equally ready for any emergency.

READY TO GO—Pilots and crewmen of Weekend Warrior Squadron VS 752 man their planes to start sub search.





JUST IN CASE—Crash crew stands by during operations. Safety precautions are emphasized in flight and on ground.

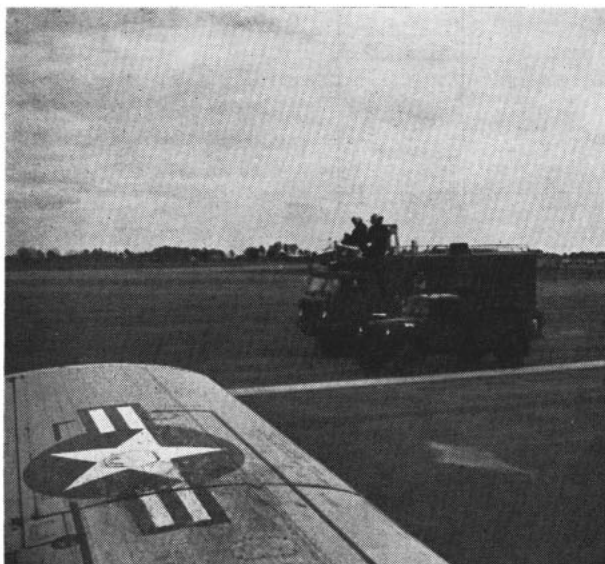
Standing Guard

BECAUSE OF EXTENSIVE safety precautions, it's assumed that each training flight at Pensacola will be made without incident—or accident. But just in case something goes wrong, the crash crew is always standing by.

The Pensacola crash crew now stands at about 50 men, on port and starboard watches. Section leaders are H. L. Darby, AB1, and J. L. Aldridge, AM1. H. E. Lester, ABC, is chief-in-charge of all crash crewmen.

The crew is equipped with two major pieces of equipment. Resembling a red, mechanical elephant, the MB-1 has a capability of dispersing more than 12,000 gallons of foam in three minutes as it moves in close and covers a flaming plane with foam, smothering out the fire.

The "cherry-picker" is a 50-ton crane that can lift a plane from a canyon or carry it through waist-deep mud with ease. The Picker is also used to turn over the aircraft if a flyer is pinned underneath.



SCRAMBLE—Crash crew dashes for vehicles during drill. Above: Plane makes safe landing as crash crew watches.



THE ASTRONAUTS: MEN

CALL HIM WHAT you like, astronaut or just plain spaceman, but he may be a Navyman and one of the first to orbit the earth in a man-made satellite.

Of seven military test pilots selected by NASA (National Aeronautics and Space Administration) for Project Mercury, three are naval aviators, one a Marine Corps aviator, and three Air Force pilots.

The team of spacemen, one of whom will be picked to make the pioneer venture in manned space flight in about two years, consists of: LT Malcolm S. Carpenter, USN, age 34, from the aircraft carrier *uss Hornet* (CVS 12); LCDR Walter M. Schirra, Jr., USN, 36, NavAirTestCtr, Patuxent River, Md.; LCDR Alan B. Shepard, Jr., USN, 35, Staff, CINCLANT; LT COL John H. Glenn, Jr., USMC, 37, BuAer; CAPT Leroy G. Cooper, Jr., USAF, 32, Edwards AFB, Calif.; CAPT Virgil I. Grissom, USAF, 33, Wright-Patterson AFB, Ohio; and CAPT Donald K. Slayton, USAF, 35, Edwards AFB, Calif.

These men, picked from 55 armed forces test pilots, are now at Langley Research Center, Langley AFB, Va., undergoing preliminary man-in-space

flight training and instruction.

Only 32 of the 55 men actually underwent the series of tests used to make the final selection. The other 23 were rejected for such reasons as education, motivation, or physical fitness.

The series started at Lovelace Clinic, Albuquerque, N.M., where the candidates were given a physical examination that lasted one full week.

From Albuquerque, the men went to Wright Air Development Center, Dayton, Ohio, where they were put through stress tests developed to simulate actual conditions they might face on their trip to outer space.

They were put in isolation for three hours. Inside the completely soundproof room there was no light—only dead, dark silence—silence like that which they may encounter in space.

They underwent tests of acceleration and deceleration similar to the conditions they may be subjected to when they blast off from the earth and again when they return to the earth's atmosphere. During deceleration tests, the men were subjected to forces as high as 32-G—32 times

the force of gravity. An 18-G impact is expected when the satellite returns to the earth's atmosphere.

To simulate the heat they may encounter when the capsule re-enters the earth's atmosphere, the men spent two hours in a chamber heated to 130 degrees Fahrenheit.

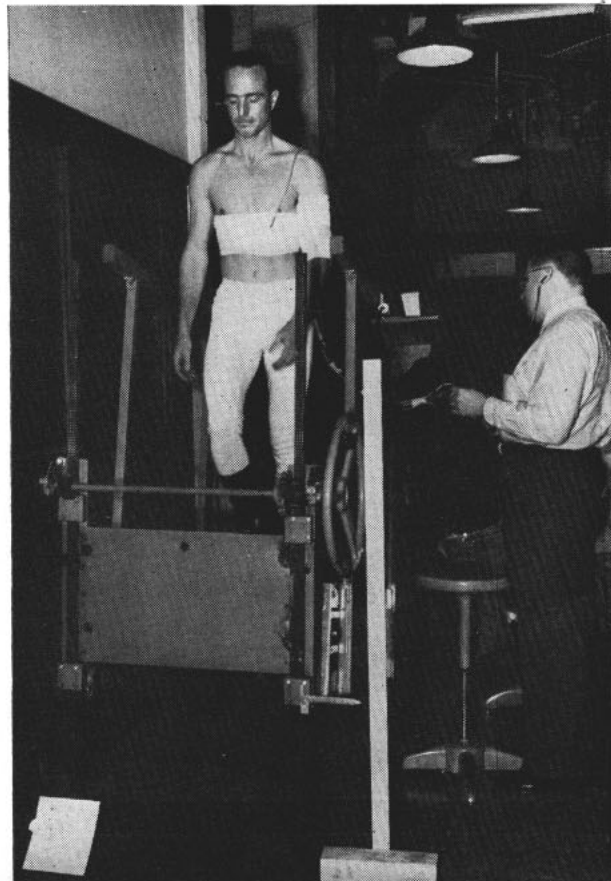
In another test, the men were blindfolded and seated in a chair that could be made to tip in any direction. They had to control the chair and keep themselves upright.

To watch their reaction when held in unusual positions, each man was strapped to a tilted table for 25 minutes.

Loud, high frequency noises were blasted at them; their feet were dunked into ice water; and they were asked to take a long walk on a tread mill. As they walked, one end of the machine was elevated one degree a minute.

The ability to think clearly is another requirement of a good spaceman. To test for this, each candidate was seated in front of a board on which were mounted 12 lights. He was instructed to do something different for each light, if it flashed on. The lights were then blinked at ran-

NO SOFT JOB—Prospective Astronauts were extensively tested. Here, LT Carpenter is given heat and tread tests.



OF SPACE

dom to see how he would react to a complicated situation.

Besides these physical tests, the potential spacemen were interviewed for long sessions, and subjected to a series of psychological and mental tests.

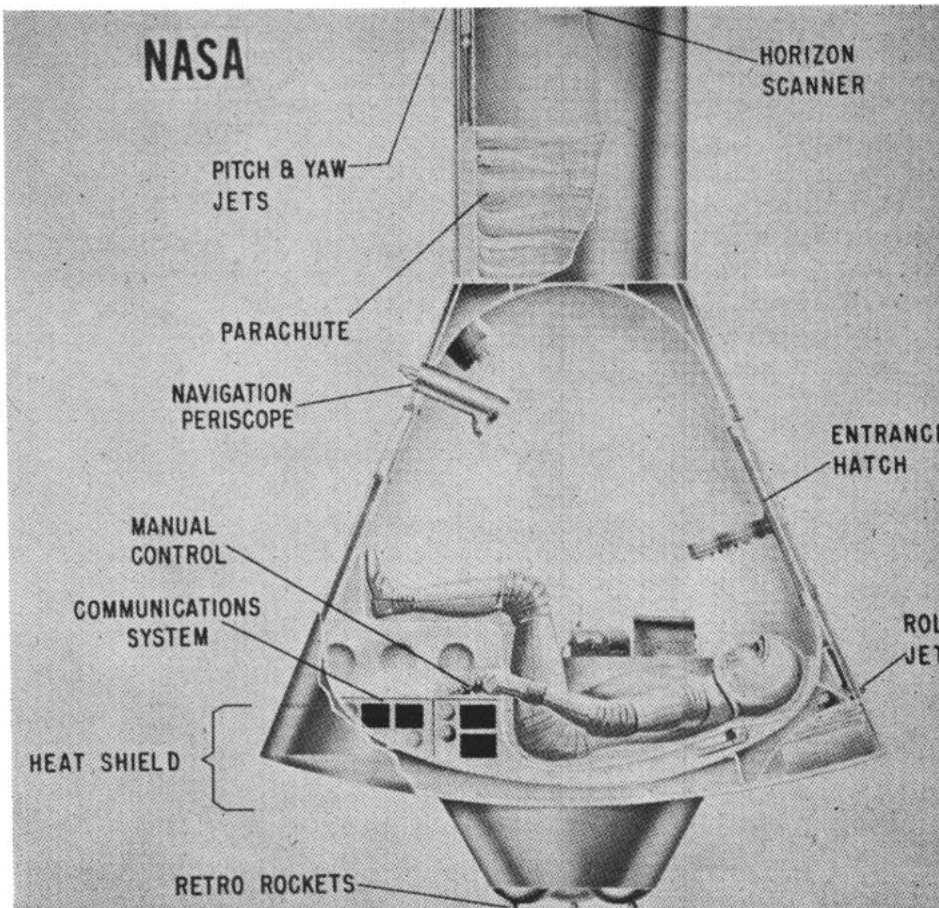
Final selection was difficult. All the men were well qualified. Officials said the tests were "the most rigorous ever given to anyone in this country . . . far more stringent than those given to any test pilot in the past." They commented that only "one in a million" could have come through as these seven did.

During the next two years, or until the *Mercury* project is ready, each man will prepare himself for the trip into space. Not one of them will know until a few hours before the flight, which one will be strapped on his back in the business end of a ballistic missile.

The space capsule will orbit at 18,000 mph about 125 miles above the earth two or three times and then drop to earth—probably somewhere over the ocean. Total time away from earth should be only a few hours. During later flights, however, scientists will extend the time to at least 24 hours.

If this first manned flight is successful there seems to be no limit to what can be accomplished. Only a few years ago if anyone talked about flights to the moon, permanent laboratories orbiting in space, and trips to other planets, his statements would probably have been dubbed as science fiction. Today it is still science, but it's far from being fiction.

Even the training astronauts re-



SPACE BUGGY—Arist's conception shows present ideas on how first manned space satellite will look as it carries an Astronaut to space and back.

ceive would have been unheard of a few years ago. During one phase, U.S. Army Redstone ballistic missiles will be used to lob the space candidates some 130 miles down the Atlantic coast from Cape Canaveral, Fla.

The astronauts are eager and confident. They feel sure they will be successfully fired into space and will be returned safely to earth. They say

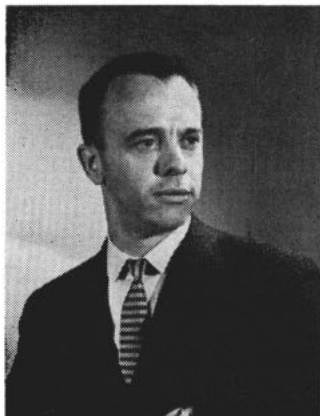
that this trip "is no more dangerous than any other test in a high performance airplane." Their wives feel the same way.

The men even joke about the test. One candidate quipped that it would probably be "the nearest to heaven I'll ever get."

Each of the seven men picked for this "trip" has over 2300 flying hours; they are an average of 34½ years in

OUT OF THIS WORLD—One of these servicemen from Navy or Marine Corps could be picked for first space flight.

A. B. Shepard, Jr., LCDR, USN



M. S. Carpenter, LT, USN



W. M. Schirra, Jr., LCDR, USN



J. H. Glenn, Jr., LTCOL, USMC



THE ASTRONAUTS—

age; have an average height of 5 feet 9½ inches; and weigh an average of 164 pounds. All of them are married and have children.

Perhaps you've served with one or more of the three naval officers or the marine who are participating in the pioneer spacemen training. For those who haven't, here's a rundown on them:

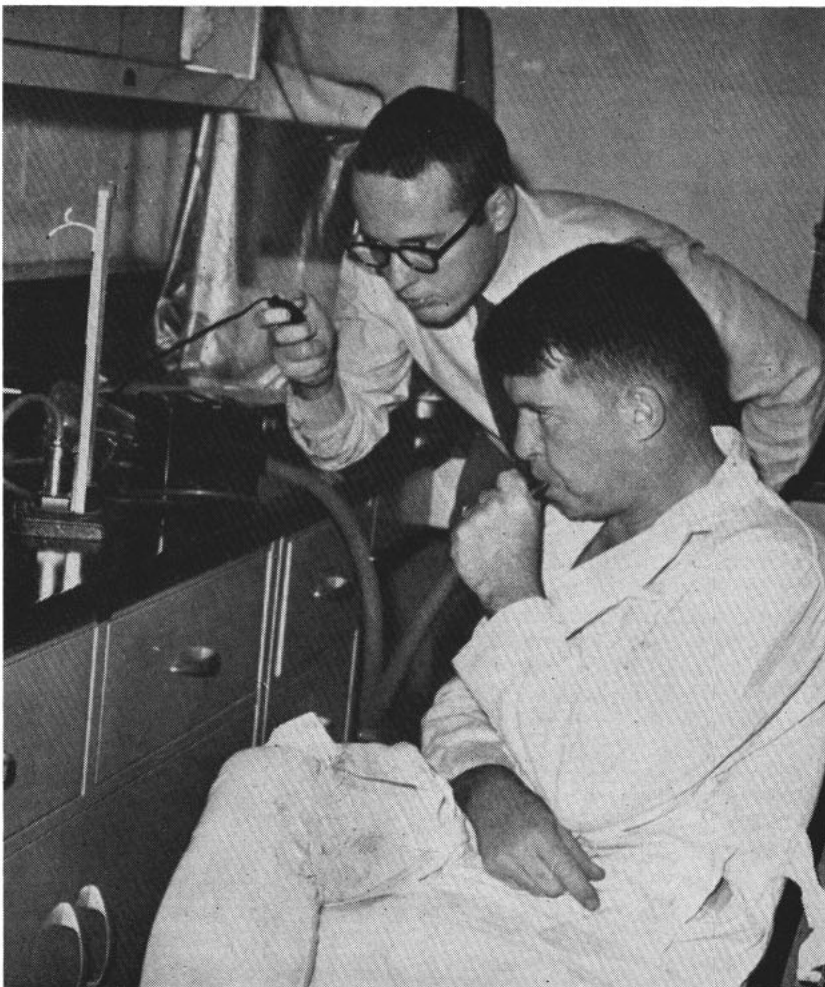
- LT Malcolm S. Carpenter, who was born in May 1925, has over 2800 flying hours, which includes 300 in jet aircraft. He lives in Garden Grove, Calif., has four children, and was graduated from college with an aeronautical engineering degree in 1949.

- LCDR Walter M. Schirra, Jr., from Hackensack, N. J., was born in March 1923. He has two children. A 1945 graduate of the Naval Academy, he has 3000 hours in the air, of which 1700 have been in jets.

- LCDR Alan B. Shepard, Jr., was born in East Derry, N. H., in November 1923. He has two children, and is a 1944 graduate of the Naval Academy. He has 3600 hours of flying time—1700 in jets. Part of his flying was during high altitude tests to obtain data on light at different altitudes. He also took part in developing the Navy's in-flight refueling system.

- LTCOL John H. Glenn, Jr., who was born in July 1921, flew 59 combat missions during World War II. During the Korean conflict he flew another 63. He has been awarded the distinguished flying cross five times and wears the air medal with 18 clusters. In July 1957 he set a transcontinental speed record of three hours and 23 minutes from Los Angeles to New York.

As you can see, each of the men are outstanding pilots. The average



BLOW ME DOWN—Navy Astronaut LCDR Shirra has his lung capacity determined during spaceman tests by blowing nose and blowing through tube.

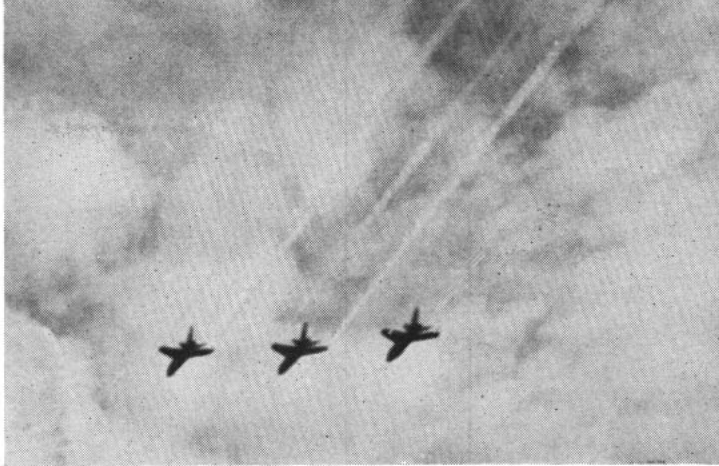
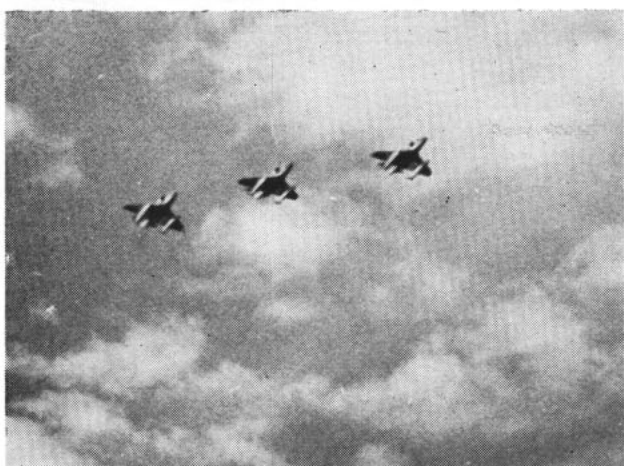
IQ for the group is 135. They drive their own car, they're well-rounded family men, and are careful about their money.

For this job, however, the men had to have just a little something extra—it's going to be a long, tough trip, and also one to remember.

The Navy has always been known for its work on the sea, under the sea, and over the sea. Little did anyone realize when that slogan was coined, however, that the "over the sea" phrase would ever encompass outer space. In this modern Navy, you just never know what's next.



SEVEN ASTRONAUTS from three military services are greeted by R. R. Gilruth (rt.) Director, NASA Project Mercury.



SEEING IN SPACE

THE GREAT INCREASE in the speed and altitude of today's aircraft continues to create new problems for pilots. One of these is the ability of individual fliers to recognize and track targets with "excessive relative motion." Another problem is detecting aircraft at high altitudes against a background of a uniformly colored sky.

Two Ph.D.'s, Dr. Elek Ludvigh, and Dr. James W. Miller, are currently working with the School of Aviation Medicine at NAS Pensacola, Fla., to find an answer to these problems.

Since July 1958 tests have been conducted in which certain basic characteristics of the eye were examined following moving targets.

The measurement of a person's ability to see an object clearly when that object is moving is called "dynamic visual acuity." (Static visual acuity is determined by using the common eye chart.)

One of the most interesting and significant results of these experiments so far was that Naval Aviation cadets who have the same static acuity (20/20) might have very different *dynamic acuity*. For example, when the test object moves at a given speed, one cadet might have a dynamic acuity of 20/40 and another cadet might have a dynamic acuity of 20/600. These tests have shown that certain pilots might be unsuited for low-altitude high-speed missions where visual navigation is essential.

Recently, 25 men underwent tests in which their visual acuity was measured while flying over targets in an AD-5 aircraft. They flew at 130 to 240 knots and at altitudes from 100 to 400 feet.

Dr. Miller and LTJG J. E. Goodson, MSC, USN, subjected these men to laboratory tests to see if the re-

sults would still be the same.

Research in the visual detection of objects against a uniform background has been limited in the past. This has been mainly because of the difficulty of producing a completely uniform field into which test objects could be introduced. Dr. Miller and Dr. Ludvigh, in an effort to overcome this, have devised a clear plexiglas, double-walled cylinder which contains a liquid fogging solution. This helmet-like device is lowered over the head and shoulders of the man being tested. He is then faced with a situation in which he sees nothing other than a uniformly illuminated white background. Under these conditions all sensation of the normal depth of field disappears and after a short period of time he may even begin to have hallucinations.

Both moving and fixed targets of different sizes are then placed at different points in the visual field. These targets may then be moved

across the field or remain stationary. The test is to find how long it takes the observer to locate the target and tell both its size and location.

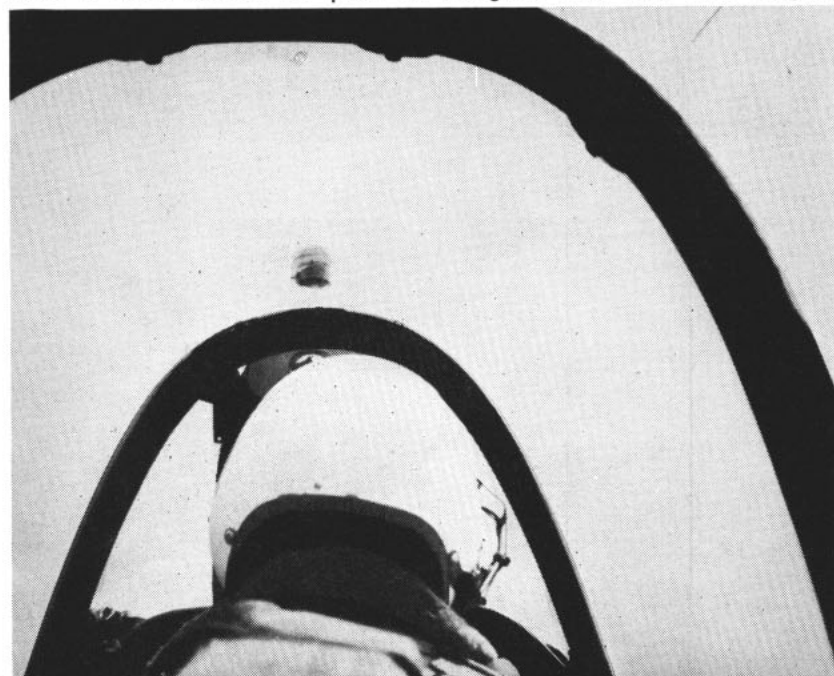
Early results indicate that observers are uncertain whether there is an object present or not, even though the targets may be of substantial size. It has been found that very large targets sometimes seem to disappear while being fixed in the vision of the observer.

There is strong evidence to indicate that the difficulty in locating objects against a field of this kind is caused primarily by "disorientation" of the pilot or an inability to search efficiently.

One report tells of two pilots who, while attempting to rendezvous at a fairly high altitude, failed to see each other in clear weather, even with radar. They returned to base without making visual contact.

Further work along these lines is being carried out at Pensacola.

PILOT'S PROBLEM—Greatly increased speed and altitude of today's planes make it more difficult for pilots to recognize and track their targets.

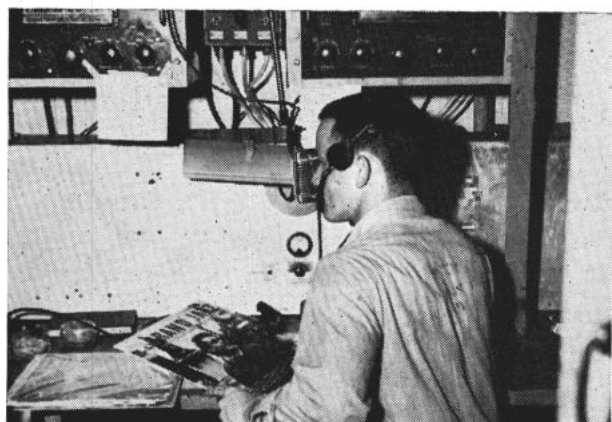




HOLIDAY ROUTINE—Carriermen take time off for worship as USS Midway (CVA 41), left, cruises through Pacific.



CREW MEMBERS enjoy boxing while off duty on Sunday.



PLEASURE APLENTY—Ship's disc jockey makes platter chatter. Below: Swim time in world's biggest pool.



Sunday at Sea

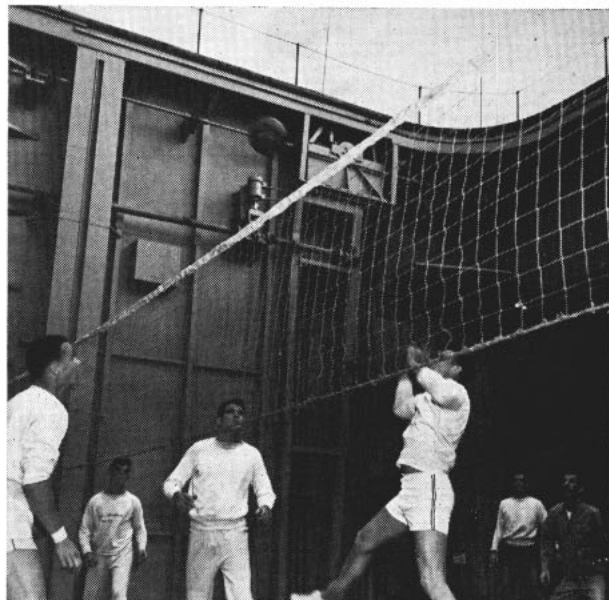
WITH THE PASSING of the word "Holiday Routine" the 3500 Navymen on board the attack aircraft carrier USS Midway (CVA 41) prepare for Sunday at sea while their ship makes way through Pacific waters en route to her home port of Alameda, Calif.

Aboard Midway this means the crew has a chance to sleep late before arising for a late breakfast in one of the carrier's five galleys. After eating a "home-cooked" meal, they attend divine services of their faith.

For recreation on Sunday afternoon they can attend a band concert, enjoy a movie, or simply take a walk along the 978-foot flight deck. The sports program aboard Midway includes volleyball games, basketball, or, when the occasion arises, a chance to enjoy the largest swimming pool in the world—the Pacific Ocean. Boxing matches are also arranged with competition among the leatherpushers in the crew. The large carrier also has its own radio station and several amateur disc jockeys take turns entertaining the crew with the latest hit tunes and news reports.

A Sunday at sea comes to an end as the bugler sounds taps. The crew turns in relaxed and ready for the coming week's work.

PILOTS have off-duty fun during volleyball game.



ALL HANDS



Ocean Pickup

RECENTLY NAVY AIRMEN of All-Weather Attack Squadron 33 took to the air without their planes. This was during a training exercise held at NAS Quonset, R. I. The exercise held in conjunction with helicopters from HS-9 was designed to give squadron personnel realistic practice in survival techniques and to test their waterproof exposure suits.

Rendezvous was held in Narragansett Bay where the "Nighthawks" individually plunged into the water from a crash boat. Copters swung into position, dropped them a line, picked them up, and carried the airmen while hanging in mid-air to a spot near the station's hangar area where they were deposited. Photos show VA(AW)-33 personnel during the practice rescue.



LETTERS TO THE EDITOR

Air Crew Insignia

SIR: As a matter of information, I'm trying to determine whether or not I still may wear my aircrew wings.

I earned these wings during World War II and have worn them up until the time that Change 5 of Uniform Regulations appeared and possibly shot me down. According to the change, you cannot wear the combat aircrew insignia unless you rate the stars to go with it. And you can't wear the new aircrew wings unless you're an enlisted man presently engaged in flying. Now what does a fellow like myself do? I don't rate the stars for my combat aircrew wings but I certainly don't wish to forget that I was an aircrewman just because I'm now commissioned.

I'm as proud of those wings as I am my gold ones. If a submariner can wear his dolphins even when he hasn't seen a submarine for the last 10 years, why can't the wings a person once earned and fought with remain a part of his uniform? I would appreciate any information you may have in regard to clarifying Change 5 and why it is written as such.—C. P. W., LTJG., USN.

• Let's start off by saying that you are correct in your interpretation of "U.S. Navy Uniform Regulations" regarding the combat aircrew insignia.

You say, however, that this prevents you from wearing the wings with which you fought. If you fought as a member of an aircrew by engaging an enemy aircraft, engaging an armed enemy combatant vessel, or engaged in offensive operations against enemy fortified positions, you would rate one or more stars on your combat aircrew insignia and you could now wear it.

Change 5 to "U.S. Navy Uniform Regulations" and Change 30 to the "BuPers Manual" (Art. C-7403) were the result of many recommendations and much research and investigation. The changes were primarily adopted to

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

provide insignia which every qualified enlisted aircrewman can wear regardless of whether the individual is now a combat or non combat aircrewman.

If he is qualified but not serving as an aircrewman he may wear the distinguishing mark. If he is qualified and serving as an aircrewman he may also wear the aircrewman breast insignia. This aircrew insignia is the enlisted equivalent of the naval aviation observer insignia.

It was realized that certain officers who have qualified as combat aircrewmen would not be eligible for this aircrew insignia. But it was considered that these officers would have the opportunity to qualify for the naval aviation observer insignia.

In regard to your take-off on submariners: When a submariner graduates from enlisted to officer status he must similarly take off his enlisted dolphins and replace them with the officer's dolphins.—Ed.

Retirement on AcDu Reserves

SIR: I'm confused and hope you can set me straight. What is the latest word in regard to retirement or transfer to the Fleet Reserve for active duty Reservists who have inactive time to their credit?—G. L. McG., YNC, USNR.

• In accordance with current regulations a member of the Naval Reserve may be transferred to the Fleet Reserve upon completion of 19 years and six months of active service. He will then

remain in the Fleet Reserve until he completes a total of 30 years' active and inactive service for retirement purposes.

However, in the event that he has already completed 30 years of active and inactive service for retirement purposes at the time of his transfer to the Fleet Reserve, orders are issued immediately to effect his retirement on the first day of the month following his transfer to the Fleet Reserve.

Hope this information is what you need to set you straight on the road to retirement. If not, give us a growl.—Ed.

Ma'am Is Correct

SIR: On page 40 of your February issue, in the article on naval courtesy, you say: A correct response to a question from a woman officer is either "Yes, ma'am" or "No, ma'am."

This contradicts both *The Bluejackets' Manual* (1957 Edition) and *Naval Orientation* (NavPers 16138-C).

On page 26, the BJM says, "Do not use 'Ma'am' or 'Sir' with woman officers; always use the rank or name."

On page 52, *Naval Orientation* states that, "The Navy Department has not authorized the use of 'ma'am' in addressing women officers."

Could you clear up this matter for me?—R. N. P., HM1, USN.

• At the time the items in the "BJM" and "Naval Orientation" were written they were correct.

However, in September 1956 (which was probably too late to make the 1957 BJM) the Chief of Naval Personnel approved the use of "Ma'am" as a suitable form of military address for women officers.

The curricula of the Recruit Training (W) School and the Officer Candidate School (W) have been changed accordingly.

The "BJM" is still correct in saying that you don't use "Sir" when you address a woman officer!—Ed.

LIFE SAVERS—Crash, Rescue and Salvage Division, NAS Cecil Field, Florida, is typical of Navy's top rescue crews.



Old Lex

SIR: I have read what to me was a most enjoyable article in the Taffrail Talk column in the January 1959 issue. The part I enjoyed most concerned LCDR Johnson's finding an old copy of USS Lexington's THE OBSERVER.

But wasn't that the "Old Lex" CV 2, and not CVA 16 which was commissioned in 1943? I had the honor of being a member of 16's commissioning crew. Both were wonderful ships.—E. S., CDR, USN.

• You are absolutely right. The carrier Lexington referred to in the Taffrail Talk, January 1959 ALL HANDS, should have been designated CV 2 instead of CVA 16.—ED.

Ribbon of Friendship

SIR: When I inquired about certain awards and medals at our personnel office I was unable to get any info on the "Friendship of Viet-Nam" medal or ribbon.

In June, July and August 1954, many amphibious ships in WestPac evacuated refugees from northern Indo-China to Saigon. SOPA received an award for outstanding accomplishment, and, to my knowledge, all men attached to the ships that participated were to receive an award.

At the time, I was attached to Commander LST Squadron Three. We were aboard USS Knudsen (APD 101), Sphinx (ARL 24), and Mountrail (APA 213). Commander Transport Division 13 in Calvert (APA 32), Montrose (APA 212), Telfair (APA 210), Skagit (AKA 105), LST 855 and LST 819 also participated.

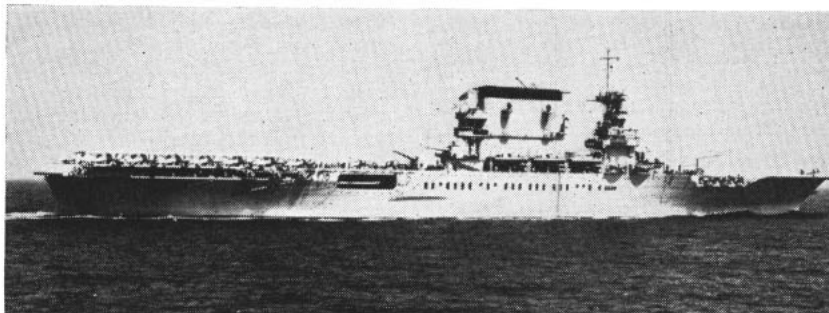
Was a medal or ribbon awarded for this operation?—H. R. A., BM2, USN.

• There was a ribbon awarded for that operation, but the name by which you call it is wrong. We believe you are referring to the Presidential Unit Citation, "Ribbon of Friendship" awarded by the State of Viet-Nam to certain U.S. armed forces units which participated in the evacuation of Viet-Nam citizens during August and September 1954. BuPers Inst. 1650.8 tells about the award.

Here are the ships and units you refer to and the eligibility dates in 1954 for each:

LSTRon 3.....	1 Aug. - 30 Sept.
USS Knudsen	22 Aug. - 30 Sept.
USS Sphinx	28 Aug. - 30 Sept.
USS Mountrail	12 Aug. - 11 Sept.
TRANSDIV 13.....	1 Aug. - 30 Sept.
USS Calvert	22 Aug. - 30 Sept.
USS Montrose	16 Aug. - 16 Sept.
USS Telfair	15 Aug. - 16 Sept.
USS Skagit	22 Aug. - 20 Sept.
LST 855	27 Aug. - 30 Sept.

If you were attached to any of these ships or units during the periods specified, you are eligible to wear the Ribbon of Friendship. There is no medal that accompanies this award.—ED.



LEXINGTON TWICE—USS Lexington (CV 2) mentioned in Jan 1959 "Taffrail Talk" is shown above. USS Lexington (CV 16) is shown below in '44 photo.



Early Retirement for Officers

SIR: I have two related questions.

First: When an officer submits a request for voluntary retirement on completing 20 years' service, who makes the decision as to whether or not the request is to be turned down because of the needs of the service?

Second: I understand that an officer requesting 20-year voluntary retirement must complete one year in his current

tour. Does this year have to be completed before the request is submitted, or can the completion of the one year period coincide with the requested out date?—J. F. P., LCDR, USN.

• According to SecNav Inst. 1811.3A, which contains information on voluntary retirement, applications from individuals in these categories will normally be given favorable consideration:

Officers, other than flag and general officers, with 30 years' service.

Flag and general officers with 30 years' service and with at least five years' service as a flag or general officer.

Captains and colonels with at least five years' service in grade.

Officers who have twice failed selection for promotion.

Officers who are limited in the assignments they can be given (for instance, an officer whose general health has deteriorated).

Officers whose retirement would definitely alleviate serious personal problems.

If a request for retirement does not meet one of these criteria, the Chief of Naval Personnel will determine whether or not approval is contrary to the best interests of the service, and so recommend to the Secretary of the Navy, who makes the final decision.

As for your second question—the one year to be completed in your current tour is counted from the date of reporting to the date of retirement. However, since the needs of the service are the major factor in determining a retirement date, you would not necessarily have to complete the one year.—ED.

Say Hello for Us

SIR: In October 1958 you published a letter about a monkey which was on board an LST at Okinawa during World War II. In February 1959 a letter from LCDR George Cole, USN, said the mascot was probably the one in LST 267.

I agree with my former first lieutenant. Our mascot, Chief, was probably the monkey in question. At least, Chief outlived the "Red Rooster of Lingayen."

Since I am heading for duty in the Orient, perhaps I may bump into Ol' Chief once again. After all he's been through, I'm sure he'd welcome anyone from "Ye Olde 267" aboard his sampan.—Lloyd E. Linton, BM1, USN.

• Since no other LSTs have put in a claim, 267 must undoubtedly be the right ship, and Chief must be the right monkey.

Now that that's settled, how about letting us in on the story of the rooster.—ED.

Summer Grays

SIR: Recently an ex-Navyman told me that, sometime during the last 15 years, there was a summer liberty uniform for enlisted men below CPO, made of a light gray material.

I maintain such a uniform never existed. Can you clear this up for us?—T. O. L., YN1, USN.

• You'd do well to listen to Grandpaw. This time, he's right.

A gray working uniform for enlisted men was authorized in 1943 by Secretary of the Navy Frank Knox. The plan was to outfit all enlisted men with that uniform. The plan was discontinued, however, in February 1944 because of a shortage of gray twill fabric.

The uniforms already made were later used as a warm weather uniform for permanent shore patrol in the United States. The uniform consisted of a gray jumper and trousers, necker-

chief, black shoes, gray hat, and a shore patrol brassard.

Again in 1946 (and this is where your friend gets away with the 15-year statement) the gray uniform was tried. This time, since it was an evaluation, the uniform was probably worn as a liberty uniform by a small number of Fleet personnel in late 1946 and in 1947. The uniform was not adopted, however, and was not available to a sizable portion of the Fleet.—Ed.

Navy Oldtimer Recalls Those Flying Boats of the Battle Fleet

SIR: In your February issue I paid special attention to the letter from MAJ Milton C. Jones, AUS (Ret.), about *uss Shawmut* and *Oglala*. Since

I have served in both ships I remember them well.

When *Shawmut* was flagship of the Atlantic Air Force, I was a member

of the first Fleet air squadron. Our CO was CDR Bruce Leighton and our executive officer was LCDR James Hawkins.

We started out with six H-16s, then got six F-5-Ls, which were later increased to 12. Both the H-16 and the F-5-L were wooden flying boats. Their motors were the old Liberty engines, which had to be overhauled after every 50 hours of flying time. Later on, we had some NCs, PN-7s, PN-8s and PN-9s—all flying boats.

Every winter we flew as spotters for the Fleet during target practice, taking pictures which I believe were the first of their kind in naval history. We didn't carry parachutes—just extra gears, a can of oil and a can of water. We'd take off in the morning from *Shawmut* and make it by noon to the minesweeper, *uss Sandpiper*, or the destroyer, *uss Harding*, to refuel. We only carried about 250 gallons of gasoline in four tanks for the two Liberty motors.

When we first started to fly with the Battle Fleet everything was new to us, but we soon got used to our work.

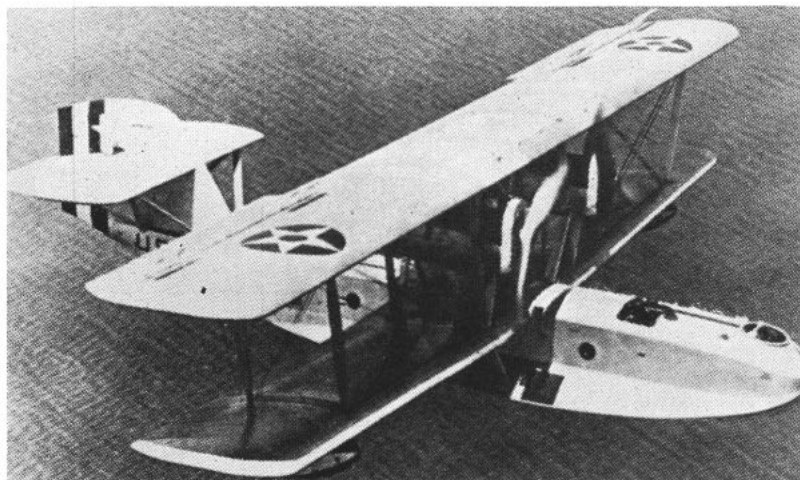
On cold days, the planes' motors were very hard to start, because we only had six-volt batteries and hand cranks. Another problem was having light gears in the motors, which broke down quite often.

How well I remember Tom Maxted, the Navy heavyweight champ mentioned in your February issue, for I have worked out with him. After he left the Navy he went seven rounds with Luis Firpo, "The Wild Bull of the Pampas."—Paul F. Forster, ADEC, USN (Ret.)

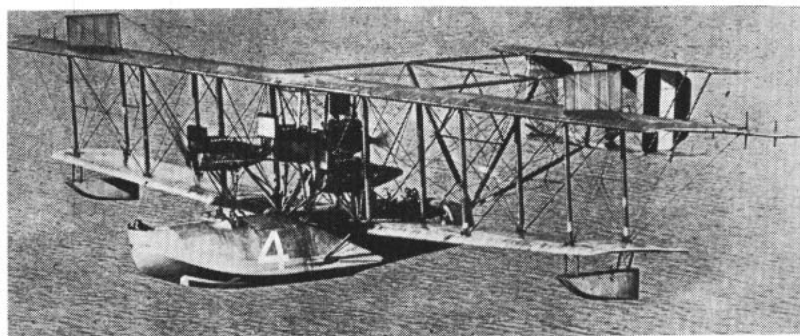
• Anyone who could have lasted that long with Firpo must have been quite a fighter.

And, for our money, the men who flew in those early planes were no slouches either.

Sometimes, it's hard to realize what tremendous strides aviation has made since those pioneer days. Here we are, talking about sending men around the world in space satellites, and yet, some people can still remember when the air age was just barely getting started. And they're not even old timers.—Ed.



Navy PN-9 Flying Boat



Navy NC Flying Boat



Navy F-5-L Flying Boat

Foreign-Speaking Planes

SIR: The "1920 Marine fighter-trainer" shown on page eight of your November 1958 issue is rather unusual inasmuch as the aircraft is a Fokker D-7, the famous German pursuit plane of World War I. Although the Marine Corps operated a varied assortment of ex-Allied aircraft in the early '20s, this is the first time I have seen a photo of a D-7 with Marine Corps markings.—William A. Riley, Los Angeles, Calif.

• An interesting and very true observation. The plane, which ranked as one of Germany's best WW I fighter planes, was received by the U. S. Marine Corps in 1920 as part of Germany's reparations following World War I. U. S. Marine pilots used the Fokker D-7 for training. It had a speed of 130 mph.

You also pointed out that the Marine Corps operated a varied assortment of ex-Allied aircraft in the early '20s. Right again! For example, in 1918 they received four British-designed DeHavilland DH-4 planes which were built in the United States. This plane, nicknamed "flying coffin," later became the standard American combat plane. It could stay aloft for four hours, had a ceiling of 19,000 feet, could climb to 10,000 feet in 14 minutes, and had a speed of 124 mph.

Later the Marines flew Caproni planes from Italy, Handley-Pages from Great Britain, and DD flying boats from France.—Ed.

Zip 'n Zee

SIR: Though I am soon to be transferred from an AF, I feel it's time the reefers got some attention.

Many of the men serving in combatant ships think the crews of auxiliary ships have it easy. They might not think so when reveille was being held at 0330 so that they could break out stores for expected customers who sometimes do not appear. I don't mean to take any credit away from the combatant ships—they do a great job—but I would like to remind them the auxiliary ships are important too.

My ship is *uss Zelima* (AF 49), known to her crew as "the Zip'n Zee." She is attached to Service Force, U. S. Pacific Fleet, and I feel she is the most, or at least one of the most efficient reefers in the Pacific. She is known in WestPac as a ship that gets things done, and gets them done right, as these typical testimonials prove:

"COMSERVON Three notes with pleasure dependability and excellent performance of duty by *Zelima* during current WestPac tour. You have contributed materially to logistic support of the Seventh Fleet."

"The officers and men of *uss Edmonds* (DE 406) wish to express their appreciation for the services rendered by *Zelima* on 6 Dec 1958 in effecting repairs to number one main feed pump.



SAILING, SAILING—Landing Ship Tank *USS Graham County* (LST 1176) makes her way through Atlantic waters while out of her home port of Norfolk, Va.

The work, normally a repair facility job, was accomplished on board *Zelima*, allowing *Edmonds* to meet her operating schedule.—Commanding Officer, *uss Edmonds*.

"I wish to report *uss Lexington's* (CVA 16) appreciation and thanks for the unusual efforts made by *Pollux* and *Zelima* to supply needed items when *Lexington* unexpectedly departed Yokosuka on 21 Oct 1958. In order to top off our ship's store, clothing and small stores and provisions stocks before departing port, *Pollux* and *Zelima* cheerfully expended great effort virtually throughout the night of 20-21 October after being notified at about 2100. This was done under the handicap of a very heavy rainfall. The items involved were scheduled to be delivered on or about 24 October, but sudden change in operational orders precluded this. The efforts and responsiveness of *Pollux* and *Zelima* were a great credit to the service and to Task Force 73."—Commanding Officer, *uss Lexington*.

Pardon my boasting, but I think *Zelima* is a ship worth bragging about.—Robert E. Bell, YN3, USN.

• Y'know, we have a hunch that pride like yours is the thing that's put the zip into the Zip'n Zee.—Ed.

Intelligence Specialists

SIR: With the establishment of the new photographic intelligence-man (PT) rating, what will become of men like myself who hold Special Job Code 9936 (Operational Intelligence Specialist)?

I have worked in Operations and Intelligence since 1951. I have held Special Job Code number 9936 since 1952.

I want to remain in this field.—H. M. D., QMC, USN.

• The duties performed by Operational Intelligence Specialists are considered separate from those of the PTs. Enlisted Navymen assigned the 9936 special program code will not be affected by the establishment of the new rating.—Ed.

Exams for Advancement

SIR: As you probably heard, the February examinations consisted of 180 questions—30 more than usual. Of these, 120 were professional while the remaining 60 were strictly military.

Were each of these parts scored separately? And if so, if I failed the second part, devoted to military questions, would I fail the entire exam?—P. E. S., BM2, USN.

• The February 1959 examinations were scored in two parts but both marks were combined to establish one final score. Therefore, you could have failed either section and still have received a passing score on the over-all exam. The people responsible for the exams state that, hereafter, all E-4 through E-7 examinations will consist of 150 questions covering both military and professional subjects.—Ed.

Reserve Officers Not in Uniform

SIR: I imagine you have had a zillion letters on this, but I have had many beefs and inquiries about something you said in your short course on naval courtesy in the February issue. In the section on, "Special or Unusual Cases," which begins at the bottom of page 31, you state that: "Reserve officers not an [on] active duty and in uniform are not entitled to a salute."

I am sure you intended to insert another "not" between "and" and "in."

If I remember, you salute the uniform and insignia, not the man.—W. A. K., CDR, USNR.

SIR: In your February issue you say, "Reserve officers not on active duty and in uniform are not entitled to a salute."

If they were in uniform how would you know they were Reserve officers?—Herman T. Vest, SK2, USNR.

• Another "not" would have made the meaning clearer, especially since our typo gremlin was at work. We intended the first "not" to apply to both "on active duty" and "in uniform."

We hope this will keep down the flow of letters on the subject.—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, **ALL HANDS Magazine**, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• **uss Thomas Jefferson (APA 30)**—The 12th annual reunion will be held at the Severin Hotel, Indianapolis, Ind., on 22 and 23 August. For details, write to William A. Schutte, 850 North Pennsylvania St., Indianapolis 4, Ind.

• **uss Quincy (CA 71)**—The eighth reunion is scheduled for 14, 15, and 16 August, at the Hotel Saint George, New York City. More details are available from Robert Moore, 68 Allison Rd., Roselle, N. J.

• **LCI(L) Flotilla 24 and Beach-jumper Units Six and Seven**—The sixth reunion will be held on 18, 19 and 20 September at the Pere Marquette Hotel, Grafton, Ill. Write to Milton B. Kirby, Woodruff Building, Springfield, Mo.

• **SACO—U.S. Naval Group China**—The fifth annual reunion is scheduled for 31 July through 2 August at the Edgewater Beach Hotel, Chicago, Ill. For more information, write to George D. Crowley, 135 South LaSalle St., Chicago 3, Ill.

• **25th Seabees**—The third annual

reunion will be held on 1 and 2 August at the Hotel Bismarck, Chicago, Ill. For further information, write to Mrs. Dale C. Mutz, 302 East Main Cross St., Edinburg, Ind.

• **59th Seabees**—The seventh annual reunion is scheduled for 7, 8 and 9 August at the Atlanta Biltmore Hotel, Atlanta, Ga. For more details, write to George P. McEntire, 125 Mimosa Circle, Smyrna, Ga.

• **107th Seabees**—The fifth reunion will be held on Labor Day weekend at the Pick-Carter Hotel, Cleveland, Ohio. Write to Foster D. Jackson, 16609 Marquis Ave., Cleveland 11, Ohio.

• **uss Navasota (AC 106)**—All crew members who served from 1953 to 1956 and who are interested in holding a reunion with time and place to be decided may write to Robert K. Bauer, 3525 West 120th St., Cleveland 11, Ohio.

• **LCVP Unit Four**—All members who served during the Rhine River operation who wish to hold a reunion in New York may write to Raymond F. Bednar, 104 Kirshon Ave., Staten Island 14, N. Y.

• **122nd Seabees**—Officers of the World War II 122nd Seabees who are interested in holding a reunion next fall are invited to write to CDR M. E. Scanlan, CEC, USN, 807 North Garfield St., Arlington 1, Va.

Brassard or Shoulder Patch?

SIR: The standard "tie-down" brassard for recruiters has a tendency to roll up and down, rotate on the arm and wrinkle in such a manner that you cannot read it. We feel that it is inadequate.

As a solution to this, we think that the Navy should authorize some sort of shoulder patch for recruiters. This would contribute to military smartness as well as assist civilians to identify members of the Recruiting Service. What do you think?—F. H., OMC, USN; and R. B. L., YNC (SS), USN.

• Your proposal that Navy recruiters wear a shoulder patch sounds like a good idea, but there are a couple of reasons against its adoption.

By definition, a brassard is indicative of a type of duty of a temporary nature to which the wearer is assigned. The recruiting brassard is required to be worn by members of the Navy Recruiting Service while on duty. Personnel assigned to recruiting duty should not wear this brassard during off duty hours. If you wore a patch sewn on the uniform it could not be readily removed.

Officers as well as enlisted personnel are required to wear the Navy Recruit-

ing Service brassard. The wearing of a patch-type mark by officers is not considered appropriate.

You may submit your proposal officially to the Chief of Naval Personnel, via your commanding officer, but success cannot be guaranteed.

Incidentally if you have any recommendations concerning the Navy uniform, forward them to the bureau. They'll be carefully considered.—ED.

Deep Freeze Medal?

SIR: I would like to know if the Navy is contemplating striking a medal or awarding a ribbon for the recent Antarctic expedition. What I'm referring to are Operations Deep Freeze I, II, III and IV.—M. B. O., HM1, USN.

• A bill (H.R. 3923, 86th Congress, 1st Session) has been introduced and referred to the Committee on Armed Services. This provides for the presentation of a medal to persons who have served as members of a United States expedition to Antarctica. There is no official information available on the legislation.—ED.

Social Security and Retired Pay

SIR: I ran across an article of Social Security benefits which appeared in a newspaper. It not only left me slightly confused but, frankly, somewhat worried. The confusion stems from the figures (and some of the facts). The worry has to do with my future retiree/retirement pay.

To give you some idea, let me mention some of the statements in the article.

"If you earn \$1200, you can collect your benefits in any one year in full. But if you earn \$1200.01, you lose one month's benefits."

The article goes on to state that you can collect a benefit in any month in which you earn no more than \$100 a month (formerly it was \$80 a month). Thus, if you earn \$4000 in one month and \$100 per month in the other 11 months, you can collect 11 pension checks even though your total earnings are \$5100. But if your total earnings come to \$2081.01, and in every month you earn more than \$100, you can't collect a single benefit check.

Why? Because, according to the article, for each \$80 or fraction thereof above \$1200, you lose one benefit check. And if your yearly earnings hit \$1280.01, you lose two checks; earnings of \$2080.01 would snatch away all checks because in every month you earned more than \$100.00.

After reading the above, you can see that it doesn't take a mathematical genius to figure that a CPO's retirement check comes to the annual sum of \$2100.00. Now for the worry part. Does this mean that I've been contributing money to Social Security and, later on, won't be able to collect any Social Security checks?—T. J. W., JOC, USN.

• First of all, military personnel can receive benefits to which entitled from Social Security in addition to their military retired pay, since retirement pay is not income for Social Security purposes.

Next point. As a general rule, you can't go on working after you are 65 and draw Social Security benefits at the same time. If you continue to work and make more than \$1200 a year, you stand to lose one month's benefits for each \$80 you make in excess of \$1200. But no matter how much you earn over \$1200 in a year, you will still be able to get the monthly benefits for any month in which you neither earned wages of more than \$100 nor engaged in self-employment activities. "Earnings" in this case mean all earnings as an employee whether covered by the Social Security law or not. Also, net earnings from self-employment, income from other sources such as dividends, interest, rents, etc., do not have any effect on benefits and therefore do not have to be reported to the Social Security Office.

Once you've reached age 72 you can earn any amount and still draw your full Social Security benefits.—ED.

Officer's Home of Record

SIR: Article B-2206, *BuPers Manual*, concerns officers' addresses. It mentions NavPers 262 and refers to all officers, although it was my impression that it applied only to Naval Reserve officers.

The article goes on to say that the form should be filed in the Officer's Service Record. What happens if it's missing from the record? A study of the form shows that it can't be filled in just any old time.

I might mention that Article B-2207 does not list this as one of the required forms for officer's service records but does, instead, list an obsolete form. Can you advise?—W. S. C., Jr., LT, USN.

• The "Officer's Report of Home of Record and Place from Which Ordered to a Relevant Tour of Active Duty" (Form NavPers 262) was introduced by BuPers Notice 1085 of 23 Nov 1956. The form became effective for use by all officers, Regular and Reserve, who, on or after 1 Jan 1957 are appointed to officer status or who report for extended active duty.

The information provided by this form is used primarily to determine entitlement to travel and transportation allowances at the time of separation from active duty. It must be included in the detachment endorsement on an officer's separation orders.

For officers who were appointed and who reported for their current tour of active duty before 1 Jan 1957, the information which would be entered on NavPers 262 is included in the officer's separation orders by the Chief of Naval Personnel.

The list of documents contained in Art. B-2207 of the "BuPers Manual" is not an all-inclusive list of documents which may be filed in an officer's service record. Only those documents required by directive should be filed.—Ed.

Duty before Retirement

SIR: Somewhere along the line I got the impression that a man completing his twenty-eighth year of active duty could apply for duty in the naval district of his choice. On the other hand, I've also heard that you must complete the full 30 before a request of this kind can be submitted. Can you clarify?—R. C. SDC, USN.

• The straight scoop is this: Individuals desiring retirement upon completion of 30 years' service may submit applications for retirement and shore duty of their choice 28 months in advance of such retirement. If you want further information on the subject, check over BuPers Inst. 1812.1.—Ed.

Sea Duty Tour

SIR: In BuPers Notice 1306 of 9 Jan 1959 (Seavey, Second Segment), all shipboard-type rates were given a decrease of from two months to almost a year in their required sea-tour commencement dates. All, that is, with the exception of EN, EM and BT. Was there any particular reason for this?

I received a query from an EN1 who was informed by a personnel man at his past duty station that he would not make the '58 segment because his sea-tour date was July 1954. He was further told that he should make the '59 segment as the dates would undoubtedly be advanced.

Can you tell me what happened? Was it the needs of the service, or is the sea duty tour for ENs going to be over five years? Will the EN1 have to put in yet another year at sea after missing the '58 segment by one month and apparently the '59 segment also?

Another question. Has the correspondence course *Military Requirements for Petty Officer 1 & C* been set up yet? The ship received several copies of the Manual NavPers 10057 but I have seen nothing so far on a correspondence course for it.—M. T. S., YN2, USN.

• You were right the first time. The sea-tour commencement cut-off dates which are established in Segment Notices are based on the needs of the service.

The EN1 in question, whose sea-tour commencement date is July 1954, will have to wait until the BuPers Notice for Segment Two 1960 is promulgated, establishing sea-tour commencement cut-off dates effective at that time.

NavPers 91207 ("Enlisted Correspondence Course for Military Requirements for CPOs and PO1s") was made available in November 1958.—Ed.

Change to Permanent CPO

SIR: Can the enlisted status of a CPO, acting appointment, be changed to permanent appointment, after he has been a commissioned officer for one year?

I seem to remember that I read this somewhere along the line. Can you set me straight?—W. M. P., PNC, USN.

• The current "BuPers Manual" does set the minimum service requirement for change of status to E-7, permanent appointment, at one year. This is being held in abeyance, however, and three years is being required.

In a forthcoming reprint of the Manual, the minimum service required will be established as three years as CPO, acting, before a recommendation can be made for change to permanent chief petty officer status.—Ed.

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THE BULLETIN BOARD

Pensacola – It's the Spot for Many Navymen and Their Families

PENSACOLA, FLA., as the home of the Naval Air Basic Training Command, is also the headquarters for a large number of Navy families. Officers and enlisted personnel who receive orders to duty there will find it interesting both from the standpoint of their naval assignment and as a place to live.

Approximately 88 per cent of the Naval Air Basic Training Command Officer billets at Pensacola are aviator billets and of these, 75 per cent are instructor billets, either flight or ground. Many enlisted men are assigned duty in the Training Command, to become an integral part of the system necessary to carry out the mission of training student naval aviators. There you will meet men in practically every rating that the Navy has to offer—aviation, adminis-

trative and clerical, electronics, engineering, medical—to mention only a few. Both aviation and nonaviation ratings are required.

Duty Assignments—Naval aviators reporting to Pensacola for the first time can normally expect to be assigned the primary duty of flight instructor. Upon reporting to Command Naval Air Basic Training they are assigned to one of the local subordinate commands for duty. Their new CO will determine the billet they will fill and send them to the Basic Standardization Group, NAS Pensacola, for a period of from six to eight weeks. Here they are transformed from a normal aviator to a well polished, qualified flight instructor. From BSG they return to their command and go to work in a Basic Training Group.

In the case of enlisted personnel arriving for duty, their assignment is determined by the personnel officer who screens their records when they check in.

Wave officers and enlisted women are assigned to numerous activities within the Pensacola complex. The Chief of Naval Air Basic Training has a senior woman officer assigned to his staff as "Assistant for Women" to act in an advisory capacity on matters concerning the administration of women personnel. In addition, the CO of each naval activity to which women personnel are assigned has designated one woman officer (Wave Representative) to advise him and furnish supervision as required for the administration of women within his jurisdiction.

Officers, NavCads, AOCs and enlisted personnel under orders to the Chief of Naval Air Basic Training will, upon arrival at the Naval Air Station, log in at the Officer-of-the-Day's office.

Officers assigned for permanent duty are processed through the Basic Officer Personnel Office, Rm. 211, Bldg. 45. NavCads, AOCs and Student Officers with orders to flight training are processed through the Student Personnel Office, Rm. 220, Bldg. 45.

Enlisted personnel are processed by the Enlisted Personnel Officer of the field or unit to which they are ordered.

The Marine Aviation Detachment is located in Buildings 701 and 626 at NAS Pensacola. Directly under the Chief of Naval Air Basic Training, the Marine Aviation Detachment is the administration center for all Marine officers, student and instructor. All Marine officers reporting for duty check in at Building 626.

Housing — Generally, housing in the Pensacola area is not considered critical, in comparison with other military bases. There are many housing possibilities available to those who make use of the various means of locating them.

Single officers or married officers who do not bring their families with

Two Of Every Ten NavCads Are From Enlisted Ranks

At least 20 per cent of all Naval Cadets are picked from enlisted men on active duty. Sometimes this figure is even higher. Currently, for example, about 30 per cent are former bluejackets.

The qualifications are high and competition is keen. Men selected enter a program in which they become both officer and aviator.

If you're interested, look over the following qualifications. You may be a potential naval aviator. To be eligible, you must:

- Be an enlisted man of the regular Navy or Naval Reserve on active duty for at least a year before submitting an application.

- Be a citizen of the United States.

- Have 60 semester hours or 90 quarter hours of unduplicated college work at an accredited college or university, or have successfully completed the USAFI General Education Development Test, one-year college level, with a minimum combined GCT/ARI of 120, and MECH score of 58, or have either

30 semester hours or 45 quarter hours of unduplicated college work at an accredited college or university.

- Be at least 18 and under 25 years of age when you submit your application.

- Agree to remain on active duty for three and one-half years after you finish flight training.

- Be unmarried and agree to remain unmarried until commissioned.

- Be physically qualified and aeronautically adapted for the actual control of aircraft in accordance with Chapter 15 of the *Manual of the Medical Department*. (Waivers of age and physical standards will not be granted.)

This program leads to a commission as Ensign in the Naval Reserve. If you think you meet the above qualifications, submit your application to the Chief of Naval Personnel (Pers B6), via your commanding officer. BuPers Inst. 1120-20B (effective 1 Jul 1959) gives all the details.

them may check into BOQ 600.

For married personnel, the housing picture is constantly changing. Most of the time housing is plentiful, yet there are times when the situation is critical because of large turn-overs which occur several times a year.

As a general rule, however, housing is no particular problem. There are a limited number of public quarters aboard. Married officers wishing quarters aboard for their families should make application to the commanding officer through the aide to the executive officer.

Married enlisted personnel should apply to the housing officer, Building 734, Woolsey Court, just inside the Main Gate (Phone 7151). There is usually a waiting list for enlisted housing.

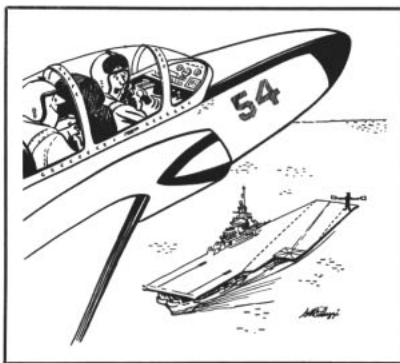
There are many housing projects and subdivisions in the Greater Pensacola area. Furnished rentals run from about \$60 to \$85 for one-bedroom units; \$65 to \$110 for two-bedroom units and \$85 to \$125 for three-bedroom units.

Wave officers assigned to activities either based aboard NAS or within commuting distance may check into BOQ 600. Women officers assigned to the U.S. Naval Hospital live in BOQ Bldg. 664 within the hospital grounds. Women officers assigned to NAAS Whiting Field live in BOQ 1450 at Whiting Field.

Enlisted Waves assigned to activities based at NAS (except USNR) report to the Waves Master-at-Arms, Bldg. 650, for assignment to living quarters in one of the two Wave Barracks—650 for non-rated Waves and 652 for rated Waves.

Enlisted women assigned to the U.S. Naval Hospital, NAS Pensacola, live in Bldg. 485 within the hospital grounds. Enlisted women assigned NAAS Whiting Field live in Bldg. 1414 at Whiting Field.

Buying a House—The Pensacola Chamber of Commerce maintains a list of area realtors who may be contacted in regard to rentals. The West Pensacola Chamber of Commerce keeps a current list of available rentals reported by homeowners and will furnish the information to anyone calling them (HEmlock 8-9407). Other means of learning of rentals are the classified ads in the local papers and the station newspapers. Some find it worth-



"He's had plenty of training—he worked his way through college as a parking lot attendant."

while to drive through the residential area looking for rental signs. Often some of the better units are rented this way without resorting to advertising.

For those interested in buying a house, the average equity (subject to change, of course) is between \$1,000 and \$2,000. Equities are somewhat lower for the newer houses and higher for older ones. Monthly payments vary considerably with \$60-\$70 as an average. Many find purchasing a home as the most economical housing plan, for the house may be rented or resold when the tour is over.

Florida has a homestead exemption law which permits home-owners (they must actually live in the house) to be free from the real estate tax. There are certain provisions, how-

ever, which must be complied with. An important one is the proper filing of application for exemption. Unless done according to the rules, exemptions may not be granted. Tax on a house with sale value of \$15,000 is about \$250, depending on assessment valuation. Ownership deed must be executed and recorded and the owner must be living in the house before 31 December in order to file for exemption for the ensuing year. Application for exemption must be filed with the Tax Assessor before the end of March following the year of purchase and each year thereafter.

Utilities—Gulf Power Company supplies electric service to Pensacola and Milton. The Pensacola office is located on Pace Blvd. just north of Garden St. The telephone number for all departments is HE 2-7451. Local offices in Milton are located on Willing St. just north of Highway 90.

Natural gas is available through the City of Pensacola. Deposit required is \$10.00, payable at City Hall. Water, when supplied by the City of Pensacola, requires a \$3.00 deposit. In the Warrington area, water is from People's Water Service Company and no deposit is required.

The Southern Bell Telephone and Telegraph Company, with its business office located at 418 W. Garden Street, serves residents in the Pensacola area.

To obtain telephone service it is

You May Become a Naval Aviator as an AOC

Enlisted men in the Regular Navy or Naval Reservists on active duty who are college graduates may apply for flight training as Aviation Officer Candidates.

To be eligible under the AOC program, an enlisted man must:

- Be a citizen of the United States.
- Be at least 19 years of age, but under 26, at time of submission of application.
- Have a baccalaureate from an accredited college or university with a minimum of 120 semester hours.
- Be physically qualified and aeronautically adapted for the actual control of aircraft in accord-

ance with the *Manual of the Medical Department*.

- Have 20/20 vision, uncorrected.
- Agree to remain on active duty three and a half years after completion of flight training.
- Be at a permanent duty station for at least two months.

Selected candidates will be ordered to NAS Pensacola, Fla. After successful completion of 16 weeks of officer indoctrination and pre-flight training, they will be commissioned Ensign in the Naval Reserve.

Applications should be forwarded via your commanding officer in accordance with BuPers Inst. 1120.29.

How to Qualify as an 'OI' for Flight Training

Flight training may be taken by officers already in the Navy or Naval Reserve, and by those men soon to be commissioned.

To be eligible as an "OI" (for Officer Input), you must:

- Be a line ensign or above in the Regular Navy or Naval Reserve, or be in training as an officer candidate leading to a commission as ensign in the line of the Regular Navy or Naval Reserve.
- Be less than 26 years of age at the time of application.
- Have successfully completed a minimum of four semester's undergraduate work at an accredited

college or university. (You must have been in good academic standing at the finish of the final semester's work.)

- Be physically qualified and aeronautically adapted for the actual control of aircraft.

- Not have been previously separated from any flight training program of the Army, Navy, or Air Force, except for reasons of being temporarily physically disqualified.

Officers must also agree to remain on active duty for a definite time after they complete flight training. See BuPers Inst. 1520.20A for detailed information.

a minimum amount of \$5,000, \$10,000, \$5,000 property damage and valid for an extended period.

Fourth: Have valid operator's permit with you at time of application.

Violation of station and local traffic laws results in the assignment of demerits, the accumulation of which can result in suspension of station driving privileges.

Legal Assistance—Legal assistance for all military personnel and their dependents is readily available. Each command has a full-time certified lawyer who is qualified to render legal assistance.

You will find all these legal officers well equipped and ready to provide competent legal assistance without any obligation.

The Commissioner of Motor Vehicles is located at Tallahassee, Florida. License plates expire on 31 December. There is a grace period for new license plates until 20 February. The cost is from \$5.00 to \$25.00 depending on the weight of the vehicle.

You can obtain a driver's license at 18 years of age or at 16 years with parental consent. Driver's license expires on 30 September and costs \$1.25.

The city of Pensacola requires dogs to be licensed. A rabies inoculation is required. License for male dogs costs \$1.00; for females \$2.00.

For residents of the State of Florida, a fishing license for fresh water fish costs \$1.75, except that no license is required in the county of residence provided a pole or line is used.

A hunting license for residents of the state at large for counties other than the county of residence is \$4.00 per county. Hunting license for residents for county of legal residence is \$1.75.

Taxes—There is no Florida state income or inheritance tax. There is a city and county property tax. The rate is variable and based on assessment value. There is \$5,000 homestead exemption on most of the city and county property. The rate also varies slightly in various areas. The tax in the city comes to approximately \$10 per \$1,000 and about \$50 per \$1,000 in the county.

Dependent Passes—The new dependent passes are now in use. They are a means of identification for your dependents and also serve as

necessary either to visit the business office or to dial HEMlock 3-9001 where a representative will help you with your telephone problems.

Household Effects—Upon arrival in the area either call GL 5-3211, extension 2250 or 7207 or check at building 603, Household Goods Section, to see if your goods have arrived.

If your household goods are consigned to storage and you are unable to accept delivery within 90 days, it will be necessary for you to sign papers for additional storage. This must be done before the expiration of the 90 days if the government is to assume the charges.

If you have made express shipment of items of extraordinary value and consigned to the express company in care of yourself, it will be necessary for you to handle the delivery with the express company or pick it up yourself, as the government will not make delivery.

If your household goods are damaged when you receive them, call the Household Goods Section and request information on procedure to follow. Do not refuse to sign commercial bill of lading and/or freight bill on government bill of lading because your property has been damaged. Make a notation on the reverse side of the government bill of lading and in the space "Receipt of Delivery" on the commercial bill of lading and/or freight bill, as well as the carrier's inventory. Do not discard or repair the damaged property before it is inspected.

Vehicle Pass and Tag Information

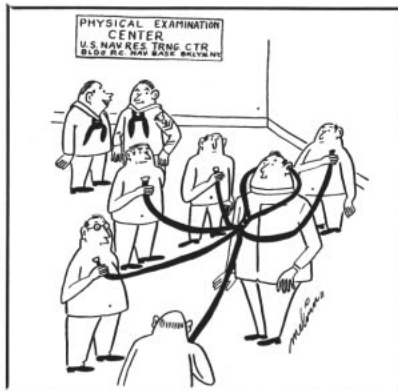
—One primary concern upon reporting will be obtaining an authorization to bring your vehicle aboard. You can obtain a visitor card which is valid for a limited period of time. To obtain a permanent tag, it will be necessary to comply with the following requirements:

First: Have the vehicle in proper mechanical condition to pass an inspection. Of particular interest here are the lights, muffler, windshield wiper, brakes, hand brake, steering, tires, horn, and glass.

Second: Have the proper state registration with you at the time of application.

Third: Have an approved insurance policy with you at time of application for liability coverage in

All-Navy Cartoon Contest
J. F. Melvin, HM1, USN



"This is the reason why we can conduct more examinations in a given period than any other unit in ComThree."

an international privilege card. They are good until the expiration of your enlistment. Applications may be obtained at your personnel office.

The dependent pass must be used as identification for the following facilities: In and out gate, station movie, commissary store, Navy Exchange, Marine Exchange, medical care, officer's mess (for commissioned and warrant officers and their dependents), enlisted clubs (enlisted personnel and dependents) and station library.

UNIFORM—Here is a rundown on uniforms, as of the beginning of this year:

Uniform for Naval Officers and Chief Petty Officers

A. Summer Uniforms (15 April-31 October)

Dress Uniform	Service Dress White
Uniform of the Day	Service Dress Khaki (with coat) White Tropical long
Working Uniform	Khaki Tropical long Service Dress Khaki (without coat but with tie)

B. Winter Uniforms (1 November-14 April)

Dress Uniform	Service Dress Blue Bravo
Uniform of the Day	Service Dress Blue Bravo, Aviation Winter Working Uniform or Service Dress Khaki
Working Uniform	Service Dress Blue Bravo, Aviation Winter Working Uniform, or Service Dress Khaki

Uniforms for Naval Enlisted Personnel

A. Summer Uniforms (15 April-31 October)

Dress Uniform	White Alfa, with neckerchief and ribbons
Uniform of the Day	White Alfa
Working Uniform	White Alfa, Undress Blue Bravo, or as prescribed

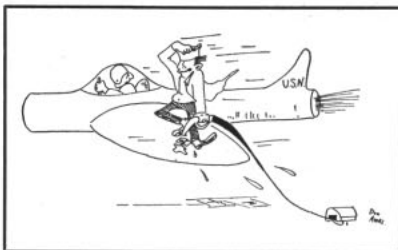
B. Winter Uniforms (1 November-14 April)

Dress Uniform	Dress Blue Bravo
Uniform of the Day	Dress Blue Bravo
Working Uniform	Undress Blue Bravo or as prescribed

Station Newspapers—One of the best ways to keep informed of what's happening and what's happened on the station is by reading the station's newspaper. The service information office of each station publishes a newspaper, distributed free to all hands.

Papers are placed in barracks, shops and offices to give each man

All-Navy Cartoon Contest
D. D. Awalt, MM3, USN



"Sir, better turn around. I'm about out of hose!"

an opportunity to read the news of his field.

Heading the list of papers is "The Gosport," published by NAS Pensacola. Eight thousand copies of this eight-page, offset newspaper are distributed each Friday. The paper contains a sports page, a civilian page, plus schedules of divine services, a list of movie schedules, new arrivals at the station library, various feature articles, and a "special events" column giving club and social activities for the coming week.

Second largest service paper in the Basic Training Command is the "Whiting Tower," distributed every Friday to personnel of NAAS Whiting Field. This eight-page, letterpress newspaper which carries both military and civilian news has a circulation of 2500.

Other NABT papers are the following: "The Seminole," NAAS Saufley Field, 1000 copies, four pages, published weekly on Friday, and "The Collective Pitch," HTG Ellyson Field, 800 copies, four pages, published every other Wednesday.

Base Locator—Call NAS information Ext. 2216. They have a locator file which tells which field or command the sought-after man is attached to. This may be enough, but if not, a call to the personnel office of his command will further locate the man through his 500 card. This will indicate division or office for which he works.

Thus, with a minimum of time and trouble, contact can be made with any Navyman in Pensacola, merely by knowing his name and the

Aviation Training for MarCads

Enlisted members of the Marine Corps may apply, if eligible, for flight training as Marine Aviation Cadets. The flight training at Pensacola, Fla., is identical to that given a Naval Aviation Cadet.

To be eligible for the MarCad program, an enlisted Marine must:

- Be a male citizen of the United States.
- Be at least 18 but less than 25 at the time the application is submitted. (Applicants under 21 must have consent of their parent or guardian.)
- Be unmarried and agree to remain unmarried until commissioned.
- Be physically qualified and aeronautically adapted to actually control an aircraft, as set forth in the *Manual of the Medical Department*. (The minimum qualifying scores on the Aviation Selection Tests are AQT: 4, and FAR: 4.)
- Have completed a minimum of two full years (60 semester hours or 90 quarter hours) of unduplicated college work. In the absence of this, the applicant must have

completed one year of college (30 semester hours or 45 quarter hours), or have the service accepted equivalent (USAFI GED college level test), plus a composite GCT score of 120 and a Pattern Analysis score of 116.

- Agree to remain on active duty for three years after successful completion of flight training.

Complete details on this program are listed in Marine Corps Order 1120.1B.

The Marine Corps also selects its own students for the Aviation Officer Candidate (AOC) program and for the Officer (OI) flight training program. The qualifications are the same as those listed for naval personnel. Complete information on the Marine AOC program for civilian applicants is listed in Marine Corps Order 1120.6 and Marine Corps Order 1111.6A. Qualified enlisted personnel may apply for AOC training in accordance with Marine Corps Order 1111.1A. Marine officers interested in flight training should refer to Marine Corps Order 1520.4.

THE BULLETIN BOARD

proper method of attempting to locate him.

Duty Officers Extensions

CNATRA—3245 Marine OOD—6202
CNABATRA—7253 Whiting
Hospital—5211 OOD—94-437
Pre-Flight—7280 Ellyson
Sch. Av. OOD—97-227
Med.—7165 Saufley
OOD—98-227

Sports and Recreation—Intramural Program: All activities in the Naval Air Basic Training Command conduct an intramural program of both league and tournament sports. The intramural sports program is normally played before the NABTC

Athletic Conference. The following sports are normally planned: golf, tennis, bowling, basketball swimming, pistol, and badminton. The announcing of schedules, coordinating and supervising of the intramural program is done through the Special Services Offices.

Naval Air Basic Training Command Athletic Conference—The NABTC Athletic Conference is an extensive Intramural athletic program of league and tournament sports for all activities in the Pensacola area. Normally, a series of matches are played among the com-

mands that compose the NABTC. These sports are usually:

Bowling	January and February	League Sport
Basketball	Nov., Dec. and Jan.	League Sport
Golf	March through June	League Sport
Softball	April through June	League Sport
Pistol	April through May	League Sport
Tennis	Tournament announced (March)	
Swimming	Tournament announced (August)	
Volleyball	Tournament announced (September)	

Each activity sponsors a team in the NABTC conference. The Naval Air Basic Training Command sponsors a varsity team in the following sports: football, baseball, basketball, golf, tennis, pistol, bowling, gymnastics and softball. The above varsity sports teams are composed of participants from the area and members of the NABTC athletic conference, except gymnastics and football. The varsity team competes with other service teams, colleges and in Navy tournaments.

New Correspondence Course Ready for Lithographers

One new Enlisted Correspondence Course is now available, and two courses have been discontinued by the Correspondence Course Center.

Enlisted Correspondence Courses for active duty personnel will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center. Your Division Officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course and materials to your command.

Personnel on inactive duty will have courses handled by the Center.

New Course

Title	NavPers No.
Lithographer 1 and C	91475-1
This course may be retaken for repeat Naval Reserve credit.	

Discontinued Courses

Title	NavPers No.
Lithographer 1	91474-A
Lithographer C	91475

WHAT'S IN A NAME

NAAS Saufley Field

NAAS Saufley Field, near Pensacola, Fla., is one of two auxiliary air stations of the Naval Air Station, Pensacola, Fla.

It is named for LTJG Richard C. Saufley, Naval Aviator No. 14, who was killed in an airplane crash off Santa Rosa Island while attempting to break an endurance record of eight hours and 43 minutes set by himself in a pusher-type aircraft. At the time of the crash, he had already been aloft eight hours and 51 minutes. Earlier, in 1916, LTJG Saufley had set an altitude record of 16,072 feet in a pusher-type seaplane.

Saufley Field was opened in August of 1940. It is the second oldest of the auxiliary air stations under the command of Rear Admiral Joseph M. Carson, Chief of Naval Air Basic Training. It has six paved, directional runways. The field is located on Saufley Field Road about 10 miles from downtown Pensacola.

The basic mission of Saufley Field has always been to train naval aviators. In the fulfillment of that mission, Saufley has, at one time or another performed nearly all phases of flight training except pre-flight. Currently, Saufley conducts both primary flight training and carrier qualifications.

The basic training groups at Saufley are organized like an operational Air Group. At Saufley, however, the squadrons comprise a Training Group. The system familiarizes flight students with the command organization they will encounter in the Fleet.

Saufley Field was purchased from local residents for \$26,000. It was then known as Felton Field (it had been Felton's Farm) but was soon officially named Saufley Field. This followed a precedent set by other area commands to name air stations for pioneers of naval aviation.

In September 1940, 100 SNJ aircraft and

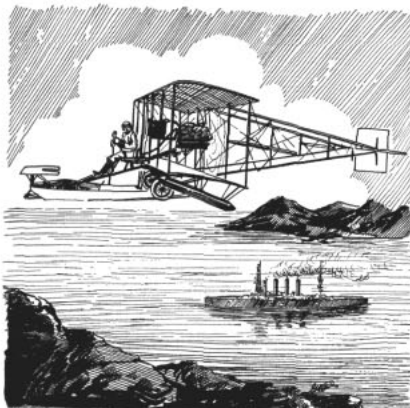
35 Link trainers were moved to Saufley. These made up an instrument flying school. Later, in November 1940, a primary training squadron was established. They used N25 and N3N aircraft. In November 1941 a second primary squadron was established.

Until 1 Mar 1943, Saufley was merely an outlying field of NAS Pensacola. On that date, however, it was commissioned as an Auxiliary Air Station, the same designation it holds today.

In 1945, the carrier qualifications training unit moved from NAS Glenview, Ill., to Saufley. This later moved to nearby Corry Field, only to return to Saufley when that field was decommissioned.

For the past 13 years, Saufley has seen squadrons come and go, the old SNJ phased out in favor of the T-28, several new commanding officers, and just recently, the first U.S. all-jet basic training program started.

Saufley Field, even today, continues to incorporate modern ideas with modern equipment to help train the best pilots in the world.



Changes in Special Allowances For Navymen on Overseas Duty

Special allowances paid to many servicemen permanently assigned overseas have been amended. In nearly all areas the amount of the allowances was changed. Some were increased; others were decreased. A few remained the same.

These allowances are payable when quarters are not available to the member or, if his dependents are with him, if no quarters are available for the dependents; and when messing facilities are not available to him (or to his dependents, if they're with him), or when a man not accompanied by dependents is authorized to mess separately.

Under the new allowance system, rates vary within an area both with the man's grade and the number of his dependents. Formerly the only distinction was between officers and enlisted men, and with or without dependents.

With the allowance changes, there also came a change in terminology. So that both *Joint Travel Regulations* and *Navy Travel Instructions* may agree in the use of certain terms, here's the way the following terms in Navy Travel Instructions should be construed:

Old Term	New Term
Cost-of-living allowances (a general term covering all overseas living allowances)	Station allowances
Station allowance for subsistence	Cost-of-living allowance
Station allowance for quarters	Housing allowance

A complete list of the new overseas allowances and per diem rates are included in Change 77 to *Joint Travel Regulations*. A change in Procedure for paying overseas allowances is contained in SecNav Notice 7220 of 31 Dec 58.

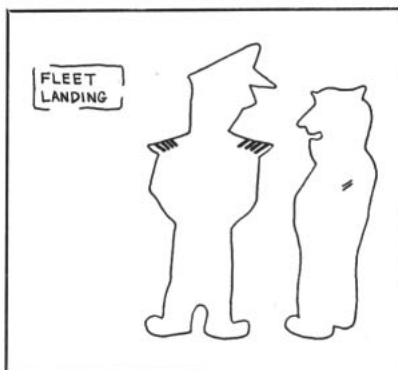
Regulations Set on Wearing Of Navy Dinner Jackets

Effective 1 Jul 1959 both the Dinner Dress Blue Jacket Uniform and the Dinner Dress White Jacket Uniform will be required uniforms in the wardrobe of Regular Navy officers in the grades of commander and above.

For Regular officers, LCDR and below, and for all Reserve officers, these uniforms will be optional.

This change will be incorporated

All-Navy Cartoon Contest F. W. Brown, YN1, USN



"How about a ride in y'er gig?"

in a revised edition of *Navy Uniform Regulations* which is to be published in the near future. It was announced in BuPers Notice 1020, 6 Mar '59.

Civilian Group Elects Nav Cad of the Year

LTJG Elmer E. Wilken, USNR, of Chattanooga, Tenn., a 25-year-old Golden Gloves boxing champion, has been named "Naval Aviation Cadet of the year." He received the National Society of the Daughters of American Colonists' award at the society's 38th annual general assembly in Washington, D.C., in April.

LTJG Wilken earned the highest final over-all standard score of all cadets who graduated from Navy Flight Training at Pensacola, Fla., during calendar year 1958. The selection was based on grades in three areas—flight proficiency, academic instruction and officer-like qualities.

Before he began flying with the Navy, Wilken attended the University of Miami for three years. It was during his stay there that he won the Southern Florida Golden Gloves championship.

After he left the university, he joined a flying school in Kendall, Fla. He earned his CAA commercial pilot's license and flew as a co-pilot for a commercial air line.

After he finished his Navy training in January 1958, he was assigned to Fleet Air Service Squadron 104 in Port Lyautey, Morocco. He is assistant Operations Officer of the squadron as well as Air Frames Officer, Ground Defense Officer and Athletic Officer.

He stopped in Washington, D.C.,

to receive his cadet award while en route to advanced training in swept-wing jet aircraft here in the United States. After completion of this advanced training, he will return to his squadron in Africa.

Latest List of Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in April.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Roots of Heaven (1279) (C) (WS): Drama; Errol Flynn, Juliette Greco.

Inn of the Sixth Happiness (1280) (C) (WS): Drama; Ingrid Bergman, Curt Jurgens.

Westbound (1281) (C): Western; Randolph Scott, Virginia Mayo.

Anna Lucasta (1282): Drama; Eartha Kitt, Frederick O'Neal.

Intent to Kill (1283) (WS): Drama; Richard Todd, Betsy Drake.

Frontier Rangers (1284) (C): Western; Keith Larsen, Buddy Ebsen.

Tokyo After Dark (1285): War Drama; Michi Kobi, Richard Long.

Old Man and the Sea (1286) (C): Classic; Spencer Tracy, Felepe Pazos.

The Man Inside (1287) (WS): Drama; Jack Palance, Anita Ekberg.

Lone Texan (1288) (WS): Western; Willard Parker, Grant Williams.

The Blob (1289) (C): Science-Fiction; Steven McQueen, Aneta Corseaut.

Watusi (1290) (C): Adventure Drama; George Montgomery, Taina Elg.

The Journey (1291) (C): Drama; Deborah Kerr, Yul Brynner.

White Wilderness (1292) (C): Documentary; True Life Adventure.

House on Haunted Hill (1293): Mystery, Vincent Price, Carol Ohmart.

City of Fear (1294): Drama; Vince Edwards, John Archer.

YOUR NAVY AND MARINE CORPS ship and shore station libraries have the latest on naval aviation: Reference and technical books on aeronautical science, aircraft operation and maintenance, aviation equipment, instruments, air navigation and meteorology.

Also in these libraries are many books to give Navymen a broad background in the history and development of aviation, air power, strategy and tactics—and famous naval and Marine Corps air actions. Listed below are a few of the many non-technical and historical books on aviation. All books will not be available in every library, but you should find a selection of interesting titles in each library.

This is not, of course, a complete list. Some of the famous accounts and possibly your favorite titles may not be listed here. That may be due to the fact that these books are out of print, or otherwise not available.

Aircraft

Ships and Aircraft of the U.S. Fleet, by James C. Fahey. Published 1958. Basic information for the expert or the man who's just interested.

The Air Forces of the World, by William Green and John Fricker. Published 1959. History, development and present strength.

The World's Fighting Planes, by William Green and Gerald Pollinger. Published 1957. A factual roundup.

Jane's All the World's Aircraft, 1958-59 edition. Encyclopaedic in scope.

British Naval Aircraft, 1912-1958, by Owen Thetford. Published 1958.

Aviation History

Wings at Sea, by Charles Coombs. Published 1958. Well illustrated account of carriers, jets and naval aviation training.

Air Base, by Boone T. Guyton. Published 1941. A navy dive bombing pilot's experiences before World War II.

Lifeline in the Sky, by Clayton Knight. Published 1957. The story of the U.S. Military Air Transport Service.

Into the Silk, by Ian Mackersey. Published 1958. Describes successful emergency jumps from airplanes in peace and war.

Ceiling Unlimited, by Lloyd Morris

and Kendall Smith. Published 1953. American aviation from Kitty Hawk to supersonics.

The Navy Has Wings, by Fletcher Pratt. Published 1943. Training the naval aviator during World War II.

They Fought for the Sky, by Quentin J. Reynolds. Published 1957. Military aviation in World War I, including the zeppelins, airplanes and the fliers on both sides.

Navy Wings, by Harold B. Miller. Published 1942. A nostalgic reminder of the not-so-distant past.

Ships in the Sky, by John Toland. Published 1957. The story of the great dirigibles.

History of United States Naval Aviation, by Archibald D. Turnbull and Clifford L. Lord. Published 1949.

Air Power Today

Air Operations in Naval Warfare, Reading Supplement, by Walter C. Blattman. Published 1957.

Air Power: Key to Survival, by Alexander P. De Seversky. Published 1950. An exposition by a leading advocate of air power.

Victory Without War, 1958-1961, by George F. Eliot. Published 1958. Points up the importance for the U.S. of the carrier-based nuclear striking power.

Impact of Airpower, by Eugene Emme. Published 1959. An anthology covering historical growth, meaning and strategical concepts of air power.

Air Power, by Asher Lee. Published 1956. Summarizes the different functions of air power and its use.

The Soviet Air and Rocket Forces, edited by Asher Lee. Published 1959. A military analysis of the revolution in, and present status of, Russian air power.

Airpower: The Decisive Force in Korea, edited by James T. Stewart. Published 1957.

The Great Deterrent, by John Slessor. Published 1958. An authority on air power discusses the development of strategic policy in the nuclear age.

World War II and Korean Actions

Then There Was One, by Eugene Burns. Published 1944. *uss Enterprise* during World War II.

Midway, The Battle That Doomed Japan, by Mitsuo Fuchida and

Masatake Okumiya. Published 1955. The battle as seen from the Japanese Navy's point of view.

Clear the Decks, by Daniel V. Gallery. Published 1951. A naval aviator's account of operations against the Germans in the Atlantic.

The Divine Wind, by Rikihei Inoguchi and others. Published 1958. The story of the Japanese Kamikaze Corps.

Queen of the Flat-Tops, by Stanley Johnston. Published 1942. *uss Lexington* and the Coral Sea Battle.

Cavalry of the Sky, by Lynn Montross. Published 1954. The U.S. Marine combat helicopter's history and tactical battle development in Korea.

I Was Chaplain on the Franklin, by Joseph T. O'Callahan. Published 1956. Heroic story of the "ship that would not die."

Zero, by Mastake Okumiya and Jiro Horikoshi. Published 1956. Japanese naval air operations from 1937 to 1945 as told by a flying officer and the designer of the Zero fighting plane.

Combat Command, by Frederick Sherman. Published 1950. Naval warfare from Pearl Harbor to the surrender with the carrier seen as a decisive weapon.

History of Marine Corps Aviation in World War II, by Robert Sherrod. Published 1952.

Marine Aviation in the Philippines. Edited and published in 1951 by the U.S. Marine Corps.

Air Spy, by Constance B. Smith. Published 1957. The story of air-photo intelligence.

Blue Ghost, by Edward Steichen. Published 1947. A master picture taker's photographic log aboard *uss Lexington*.

Biography

Come North With Me, (Autobiography) by Bernt Balchen. Published 1958. A fascinating flying career that included expeditions to both poles.

Five Down and Glory, by Gene Gurney. Published 1958. A history of the American air aces.

Admiral Halsey's Story, by William F. Halsey and J. Bryan. Published 1947.

I Took the Skyroad, by Norman M. Miller. Published 1945. A Navy bomber squadron commander's life story.

Samurai, by Saburo Sakai. Published 1957. A leading Japanese naval pilot describes his training and fighting experiences.

PENSACOLA- CRADLE OF NAVAL AVIATION



From 1914, when Pensacola was first officially designated as a naval air station, the destiny of that establishment has been inextricably woven about the history of naval aviation itself. Thus, although this supplement is primarily concerned with the history of NAS Pensacola, it must of necessity tell the story, in part, of naval aviation.

Although loyal Pensacolans stubbornly insist that the founding of their city preceded that of St. Augustine, Fla. (which, in turn, claims to be the oldest city in North America) by six years, the history of Pensacola really begins with the permanent colonization of the area by Spain in 1693.

It's simply a matter of viewpoint. In 1559, the Spanish explorer Tristan de Luna and 2000 followers is said (by Pensacolans) to have established near what is now Pensacola the first white settlement in the New World. Two years later, however, intramural disagreements caused the white man's hope to go the way of the many young colonies. It was not until 135 years later that the city was resettled by the Spaniards. From that time on it was to continue under varying regimes, to the present.

In 1718 Pensacola was captured by the French and then, within two years, the Spaniards were again in control. The city remained in their hands until, as a result of behind-the-scenes negotiations, it was turned over to the British. By 1781, it was back again under control of Spain where it remained until 1821, when Florida was ceded to the United States.

In 1824, when Congress selected Pensacola as a site for a Navy Yard (the only one on the Gulf coast), the population of the city and surrounding county of Escambia was a rousing 2518.

At the outbreak of the Civil War the Navy Yard and all the forts surrounding it except Fort Pickens on Santa Rosa Island, were seized by the Confederacy.

In 1913 the Secretary of the Navy appointed a board to examine possible sites for the first naval air station. The board unanimously chose Pensacola. It is at this point that the true history of NAS Pensacola begins.

NAVAL AVIATION may be said to have had its birth on 25 Mar 1898 when Theodore Roosevelt, then Assistant Secretary of the Navy, sent the following memo to SecNav Long: "The machine has worked. It seems to me worthwhile for this government to try whether it will not work on a large enough scale to be of use in the event of war."

Here are some other highlights on early naval aviation before Pensacola entered the picture:

The Navy took official cognizance of aviation in 1910 when Captain W. I. Chambers was given duty in connection with the study of aviation in the Navy Department, and Lieutenant T. G. Ellyson was ordered to San Diego for instruction in flying. Captain Chambers became known as the "Father of Naval Aviation," and LT Ellyson became the first naval aviator. A civilian pilot, Eugene Ely had successfully flown a landplane from a platform built on the bow of USS *Birmingham* at Hampton Roads, Va. In January 1911, Ely landed and successfully flew a plane from the deck of USS *Pennsylvania* lying in San Francisco harbor.

A month later Curtiss, who had perfected a hydro-airplane, landed alongside *Pennsylvania* at San Diego, was hoisted aboard, later hoisted out again and flew back to his camp. This performance gave a very decided impetus to the development of naval aviation. As a result of Captain Chambers' recommendations, the first aviation appropriation of \$25,000 was included in the 1911-12 naval appropriation act. Contracts were let for three heavier-than-air craft.

The year 1912 saw the development of the catapult

From *Pirates to Pilots*, 1959, compiled under the auspices of the Service Information Office, NAS Pensacola.



SEAPLANES line up along beach at Pensacola Naval Air Station in 1917 waiting for Saturday morning inspection.

designed at the Washington Navy Yard. The first shot that was attempted with LT Ellyson as pilot at Annapolis was not successful, but he later accomplished the feat from a float at the Washington Navy Yard.

IN THE AUTUMN OF 1913, a Board was appointed with Captain Chambers as chairman to determine, among other things, a satisfactory site for the establishment of a permanent Naval Air Station. This board decided upon the reopening of the Navy Yard at Pensacola. The recommendation was carried out in 1914.

LCDR Henry C. Mustin was ordered to command USS *Mississippi*—which was designated to serve as station ship at Pensacola—and so became the first commanding officer of NAS Pensacola.

The beginning was not auspicious. The sandy beach was spotted with scrapped cement blocks and decayed docks. Pine stumps projected all over the Yard. A rutted irregular sandy track led the long 12 miles through the pines and blackjack to the city of Pensacola. In this setting, with nine planes, six qualified pilots and 23 enlisted men, NAS Pensacola had its beginning.

TRAINING was interrupted in April 1914 by the outbreak of trouble at Veracruz and Tampico, and planes were sent to the area on USS *Birmingham* and *Mississippi*. At Veracruz, the planes proved their worth by conducting reconnaissance flights of value to future landing parties. While shooting pictures from the air, LT P. N. L. Bellinger drew rifle fire from the ground forces and thus

achieved the dubious distinction of flying home with bullet holes in his plane.

The event proved a belief earlier held but never proven—that rifles would not bring a plane down unless the pilot, the fuel tank or engine was hit.

The aviators had no sooner returned from Mexico than the beginning of World War I sent most of them—inadvertently—overseas. *Mississippi* had been sold to Greece and her assigned relief to Pensacola, USS *North Carolina*, had hardly been equipped and manned when, she too, was rushed to Europe without waiting to disembark her aviation personnel.

During 1915, the first Navy-designed seaplane was built at the Washington Navy Yard and on April 20th, the Navy ordered its first airship. Also in 1915, the first catapult flight from a ship underway was made from *North Carolina* by then LCDR Mustin.

DURING THIS PERIOD, appropriations for naval aviation were very small. It was often necessary for officers engaged in flying to pay out of their own pocket for gasoline, oil and spare parts if they wanted to keep flying. The first real class in aviation consisted of 10 Naval and Marine officers ordered to Pensacola in 1915. Training up to this time depended entirely on the ideas of the individual officer in charge of training. In the winter of 1915-16, training was established along definite lines.

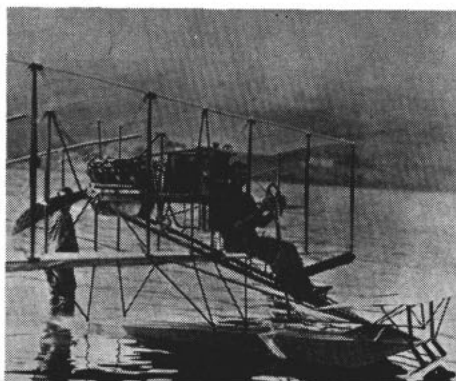
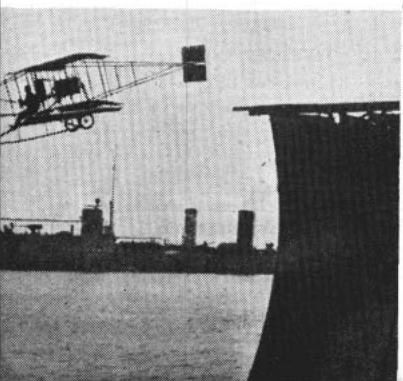
In the summer of 1916, what is said to be the first separate appropriation for naval aviation, amounting to \$1,000,000, was made by Congress—quite a jump from the \$10,000 of the year before. In December, the N-9 seaplane was adopted for training.

While awaiting delivery of the new N-9 training planes, operations at Pensacola were at a low ebb. Students who were not qualified continued their work intermittently, but no concerted efforts were carried out. However, experimental flights continued to be made. Bellinger was successful in dropping live bombs from a tailless plane and the first machinegun to be carried aloft by a Navy plane was mounted in the same craft. With the delivery of the N-9s, training once more began to take precedence and the powerful N-9s won immediate favor among the pilots, although they cautioned one another about its excess power and performance. One had to become used to it by easy stages.

THERE WAS ONE AFTERNOON when the lookout in the watchtower was alarmed to see a student flying directly toward the beach where the seaplanes were secured. The sentry waited as long as he dared and then sounded the crash alarm. The siren sang its warning and the din was increased by blasts on the powerhouse whistle. All hands rushed out to see the cause.

The N-9 rushed at them blindly. The student pilot

PIONEERS—Ely takes off (1910). Ellyson (center), first Navy pilot, and plane. Rt: First shipboard landing, 1911.



finally closed his throttle and, presumably, opened his eyes. Startled at the swiftly approaching beach, he pulled back on the controls enough to clear the heads of the spectators who had thrown themselves on the ground. The plane had sufficient speed to leap directly into the wide-open doors of a hangar where, with insufficient clearance, the wings lodged themselves. The plane remained suspended some 20 feet from the ground. The pilot climbed down by ladder and departed the field of naval aviation.

IN THE LATTER PART of 1916, in anticipation of trouble, naval aviation was expanded. Certain enlisted men were detailed for instruction with the result that when the country entered the war in April 1917 there were 48 officers and 239 men assigned to aviation, Navy and Marine Corps combined.

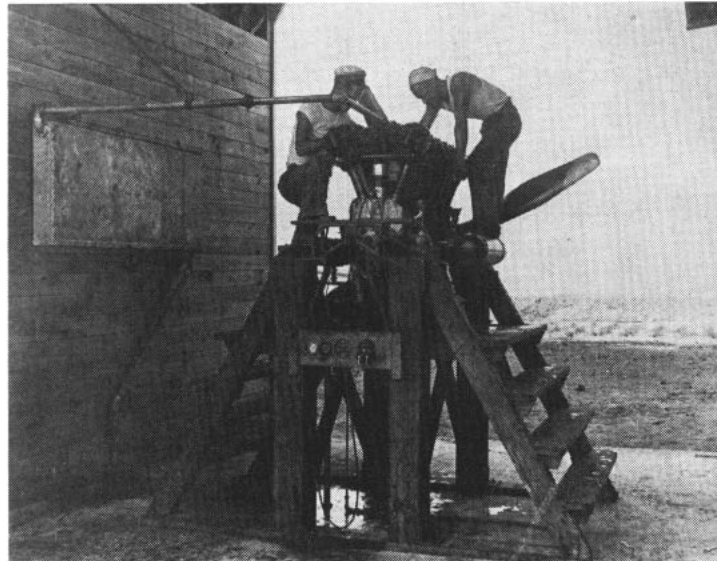
Pensacola was the only station in operation at the entry into the war. With the entrance of the U. S. into the war, the expansion of the station was phenomenal. Students who knew how to fly were taught how to fight in the air. Twin-engine flying boat instruction, bombing, gunnery, navigation, photography, spotting and the routine involved in this work employed 438 officers and 5559 men at the time the Armistice was signed. Over 200 seaplanes, dirigibles and free kite balloons were housed in steel and wooden hangars stretching over a mile down the beach. Many new structures were built, including hangars, barracks, a new concrete quay, concrete walks and roads, gas tanks, a covered boat shed and crane. During this period, the air station grew from obscurity to one of the greatest naval air bases in the world.

With the declaration of war, the city of Pensacola came to life. The station swarmed with newly-enlisted Navymen. Until a sufficient number of training planes arrived, however, there was much confusion.

By summer the station was operating at full capacity. The roar of engines filled the air from daylight to dark with time only to change pilots. When the sun had set, the last machine came into the beach where it was run into the hangar so that engines could be checked and repaired during the night.

THE LENGTH OF THE FLIGHT COURSE was reduced from 18 to nine months. However, the demand for pilots overseas became such that as time went on a student aviator who had from 25 to 50 hours flight time and who, in the opinion of his instructor, was capable of soloing, was designated a naval aviator. The student of one day was, literally, the instructor of the next.

The phenomenon of the stall was known, although there were few instructors who were willing to place their machines deliberately in a spin to demonstrate



MOTORMEN—Forerunners of today's Aviation Machinist's Mates check engine in test stand at Pensacola in 1917.

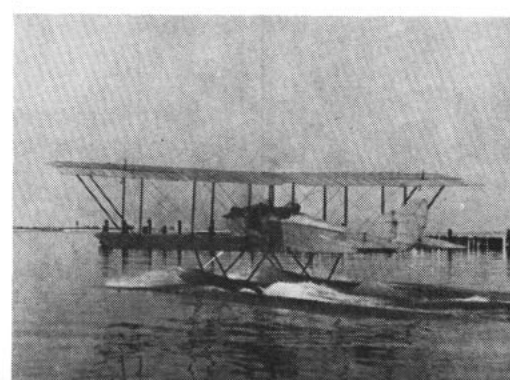
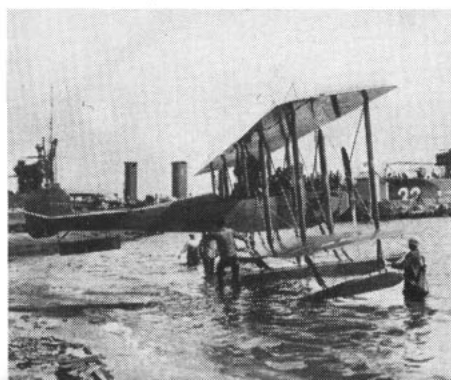
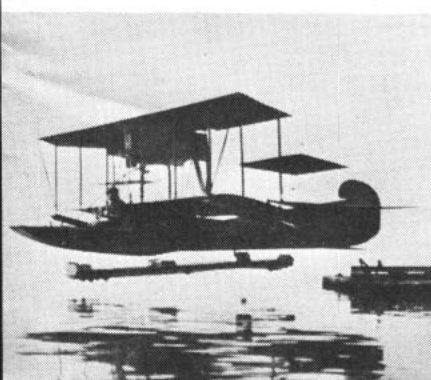
their ability to regain control. The student was instructed to keep his machine flying at a speed which caused the wires to whistle sharply. He was told: "If the wires don't sing to you, the angels will."

It had been proved that, theoretically, the heavy seaplane could not be looped. Some people refuse to believe what they are told. LT Francis T. Evans, of the Marine Corps, was of this type. In February 1917 he had taken off in an N-9 and defied mathematical calculations by looping as well as spinning the machine—successfully. For this violation of what "everyone knows," he was later awarded the Distinguished Flying Cross.

Before 1916, the Navy had spent only \$1,000,000 on aviation but during the war, \$143,000,000 was expended. When the U. S. entered the war the Navy possessed but one aircraft station, a handful of training seaplanes with none fit for combat use, and lighter-than-air equipment that was negligible. It had 38 naval aviators.

When the Armistice was signed, there were in operation 28 U. S. Naval Air Stations in Europe, 13 in the United States, (including one in the Canal Zone), one in the Azores, one in Canada and eight land-plane squadrons for special offensive operations against submarines at their bases, not to mention the numerous schools, storehouses, and the Naval Aircraft Factory. Aviation personnel, at the close of hostilities, had reached a total of 40,000—more than two-thirds the entire naval personnel before our entry into the war.

SUCCESSFUL CAT launching made in 1912. Navy airmen in 1916 move out seaplane. Pilot leaves Pensacola, 1917.





Pensacola's Fort Pickens

Fort Pickens on Santa Rosa Island in Pensacola Bay is a relic of a coast defense system rendered obsolete by the invention of rifled cannon and armored battleships. The works were built to defend the deepwater harbor of Pensacola against foreign attack, but the only time Pickens was ever under fire was during the Civil War when Federal troops manned its guns. It was one of the three southern forts that the Confederates were unable to seize.

Plans for the fortification were projected as early as 1822 in anticipation of the selection of Pensacola as the principal United States Naval Depot on the Gulf of Mexico. The fortifications later named Fort

Pickens, Fort McRee and Fort Barrancas (which means broken landscape) were built in that order between 1829 and 1844.

Fort Pickens was begun in June 1829 and completed 21 Oct. 1834, when it was garrisoned by an artillery company of 34 men. The fort was pentagonal in shape with a bastion at each of the corners and was complete with covert ways, a dry ditch and glacis or bank of earth in front having an easy slope toward the fields. Its brick walls, 40 feet high and 12 feet thick, were embrasured for two tiers of guns in bombproof casements and one tier open or en barbette. It was designed to mount 25 guns and to accommodate a garrison of 600 men during ordinary warfare or 1200 men under siege. A garrison of 50 men was considered sufficient in time of peace. During most of the time between its completion and the Civil War, the fort lacked even that modest complement and at the war's outset it had been unoccupied for 10 years.

Fort Pickens was used as a prison for military and political prisoners during the latter part of the war. The return of peace brought a withdrawal of its garrison with the exception of an ordnance sergeant who was assigned as caretaker. In 1875 Congress repaired the fort which appears to have been garrisoned and used as a military prison. The Apache Chief, Geronimo, and his band, were imprisoned at Fort Pickens between 1886-88.

It served as an active defense fortification during the Spanish-American War, and was also activated during both World Wars. After World War II Fort Pickens was declared to be surplus property. In 1949, Fort Pickens was presented to the Florida Board of Parks.

AS SOON AFTER the Armistice as February 1919, a squadron of H-16 flying boats was sent to the Fleet wintering at Guantanamo. In the summer of 1919, the Pacific Fleet Air Detachment was organized. The following winter the air force of both Fleets accompanied their Fleets on the winter cruises and took an active part in the tactical problems and gunnery exercises and in the joint rendezvous at Panama.

During the war it had become apparent that if naval aviators were trained in landplanes as well as in seaplanes, there would be no limit to the training possibilities at Pensacola. Furthermore, it was reasoned that naval aviators would have to be trained in landplanes if the aircraft carrier was to become a reality.

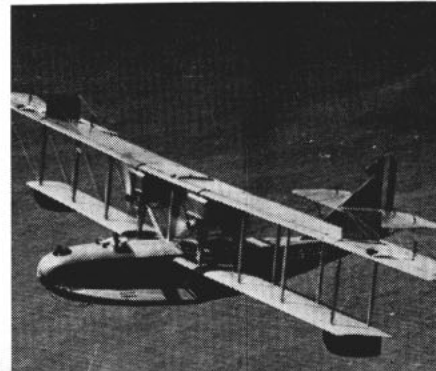
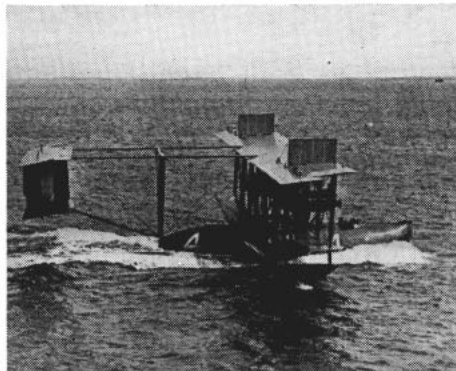
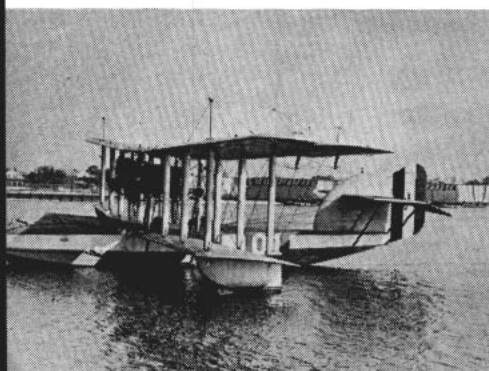
Thus, most of the town of Woolsey, which was located on the present site of Chevalier Field, was razed in 1920 and 1921 and the training center's first field was created.

To enlarge the facilities of Station Field, as Chevalier was then called, the city of Pensacola acquired property north of the city and made it available to the station as a practice field. This was the original Corry Field.

MEANWHILE, USS JUPITER, a collier, was converted into USS *Langley*, the Navy's first aircraft carrier. After her commissioning in Norfolk on 20 Mar 1922, *Langley* steamed south and during the next several months conducted numerous experiments in the vicinity of Pensacola. By 1923, the captain of *Langley* reported that he could handle with reasonable safety three heavy planes in seven minutes.

In 1922, the Bureau of Aeronautics proposed that every battleship and cruiser should have two fighter planes and two observation planes while each destroyer leader, each first class destroyer and each submarine of

FLYING BOATS like these twin engined jobs made history at Pensacola. (left to right) F5L, NC No. 4, and H-16 boats.



cruising size should have one plane of each type. On aircraft tenders there were to be four observation planes and 12 patrol planes, and the complement for future carriers was established at 30 fighters and as many observers, 15 scouts and 15 torpedo planes.

It didn't quite work out that way. In 1926, Congress authorized a five-year program which aimed for 1000 planes and two dirigibles. Also urged was the building of one 13,000-ton carrier in each of the next five years, but only one, *USS Ranger* (CV 4) was commissioned. In 1927 Lindbergh and Byrd flew the Atlantic and *Saratoga* (CV 3) and *Lexington* (CV 2) were commissioned. The NY replaced the N-9 as the basic training plane at Pensacola. Two years earlier, Station Field had been expanded from its original 25 acres to a robust 62 acres.

BACK AT BUAER, there were personnel problems. The Act of 1926 had made no provision for additional men to meet the 1000-plane program.

The proposal was made that the quality of enlisted men reporting for instruction at Pensacola would be improved if they had already passed through a screening at Hampton Roads or San Diego. After a 10-hour elimination course, those who passed went to Pensacola while those who failed took 10 weeks of training at Great Lakes, followed by six months of aviation afloat, and if finally found qualified went to Pensacola in their turn. This lasted until the recommendation for the acceptance of enlistments for aviation duty only.

This was followed by the buildup of the Aviation Reserve.

Since most of the young Reserves had been taught how to fly the old N-9, the discovery of the great difference in the newer planes was a strong indication of the need for bringing Reserve training up to date. A refresher course was established at Pensacola for Reserve officers who could qualify as instructors after taking it. In addition, more advanced courses, lasting 60 days and including 100 hours of flying, were established with the understanding that Reserves who did well in these would become eligible for one year's active service with the Fleet.

By 1930, it became evident that the original Navy Yard behind its original walls was not large enough to house all the facilities of the expanding naval air station. On August 7 of that year, the razing of the town of Warrington, which lay to the west of the wall, was begun. Residences, churches, schools, lodges and garages were removed. Many were demolished altogether, but some of them were moved across Bayou Grande and rebuilt in the present community of Warrington. One building still standing from Old Warrington is Building 191, the present headquarters of the air station band. It used to be a grocery store.

KITE BALLOON taken from hangar at Pensacola, WW I.



Pensacola Lighthouse

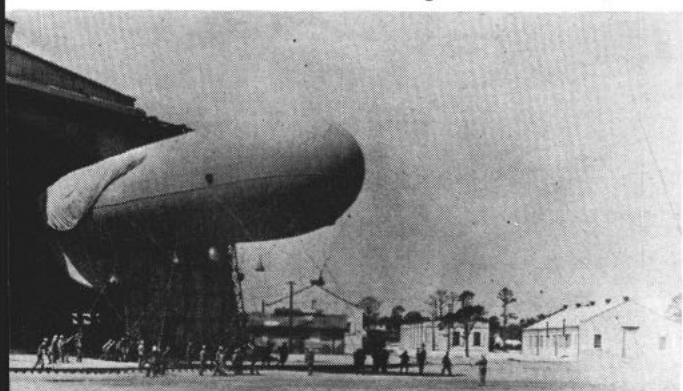
An act of Congress in 1823 appropriated \$6000 for the erection of the Pensacola Lighthouse. Jeremiah Ingraham was appointed keeper in 1824 and served until his death in 1840. He was succeeded by his wife who served until 1855.

The height of the tower was 80 feet above the sea. In October 1853 the Commandant of the Navy Yard recommended that either the lighthouse be made 20 or 25 feet higher or a new one built. He had reached the conclusion that points at sea were concealed by the lofty pines on the coast. The next year Congress appropriated \$25,000 for rebuilding the lighthouse and elevating the illuminating apparatus. The lighthouse and new set of ranges were completed and lighted 1 Jan 1859. The height of the light above sea level was now 210 feet.

During the Civil War the tower was struck many times by solid shot.

During the 1870s the lighthouse endured several attacks by the weather. Twice it was struck by lightning with considerable damage done to the brick masonry of the covered way between the keeper's dwelling and the tower. In 1877 a tornado damaged the slate roof of the keeper's house and it was replaced by a shingle roof. In 1878 it was discovered that the tower was cracked inside, beneath the lantern. During the war the tower had been struck and it is possible that some of the hurricanes since that time were beginning to make the effects of the shots visible. The next year \$5000 was spent for repairs and in 1884 mineral oil lamps were installed.

Today Pensacola Lighthouse stands 171 feet above the ground and 191 feet above the water. The 400,000-candlepower electric light, flashing every 20 seconds for two seconds, is visible for 20 miles.



TAFFRAIL TALK

ALL HANDS will never be the same again. Tom Wholey, JOC, USN (Ret.), who hit his 19 and six in May is getting ready to make his contribution to the Navy as a civilian. His place on the News Desk is being filled—and very well, too, thank you—by Jerry McConnell, JO1, usn, who arrived on deck fresh from four years with Submarine Force, Pacific. Milestones in his career have included to date, such spots as Fleet Home Town News Center, Great Lakes, Ill., San Francisco, Kwajalein, and San Diego.

And you had better appreciate Patrick's gags while you may for, at the moment, he is preparing for a long, slow trek across country with wife and youngsters before embarking for Subic Bay and Olongapo. To the best of our knowledge, Pat is the only DC1 who is as good an illustrator as he is a Damage Controlman.

We are firmly convinced that no one can ever (and who would want to?) take the place of Pat, but we think we have a close second in Guirino (Jerry to us) Paluzzi, DM1, usn. He's as familiar with the East Coast as McConnell is with the West Coast. Patuxent, ComAirLant and LSM 446, were his haunts before ALL HANDS.

* * *

Speaking of uniqueness, we refer you to the sad case of the lad who is still trying to figure out whether he's really 21 or 22 years old, or is it only 20? Or did he celebrate his 21st and 22nd birthday on the same day? Here are the facts, gentlemen.

Jerry M. Ratcliffe, BTFN, usn, was serving on board USS *Renville* (APA 227) back in 1957 when the westbound attack transport crossed the International Dateline just in time to deprive him of his 20th birthday. However, in 1959, while returning from a tour of duty in the Western Pacific, *Renville* and Ratcliffe crossed the International Dateline heading in the opposite direction—also on his birthday.

* * *

So you think Ratcliffe's got problems? Consider the harrowing afternoon of T. A. Tuazon, JO3, on the day of his graduation from boot camp, San Diego. We weren't there ourselves, but this is how he reported the debacle to *The Crossroads*, Guam:

I was nervous, to say the least, for in spite of my being the Recruit Brigade Commander, I was a mere seaman recruit. Moreover, at the start of the parade, when my staff—a bugler and an adjutant—and I were in front of the reviewing stand, instead of saying "Right, face!" I sang out "About, face!"

The bugler and adjutant, however, disregarded my command and executed the proper turn, but I tarried too conspicuously long before making my turn. This sign of nervousness apparently infected one battalion guidon bearer, who later dropped his guidon twice.

All this was bad enough, but to compound the seriousness, the reviewing officer just happened to be ADM Arleigh A. Burke, Chief of Naval Operations.

That was why, when ADM Burke shook my hand and commended me for "A fine job," I could only mutter something like "Oh, but we made some mistakes, sir."

To that, he winked and said: "That's all right, son, you recovered quite well. To do such a difficult job right, you've got to make some mistakes."

He's a fine man, that Admiral Burke.

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keystones of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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• **AT RIGHT: ON GUARD** — E. J. Galley, AA, and L. R. Thompson, AA, members of the Crash, Fire and Rescue Team at NAAFS Saufley Field, stand by as flight students gain experience in the air.

ALL HANDS



FITNESS FOR FLIGHT



THE NAVY WAY